THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXXVI. NEW YORK, SATURDAY, FEBRUARY 10, 1900. No. 6.

ORIGINAL ARTICLES.

THE POLICY OF THE STATE RELATIVE TO THE SPREAD OF TUBERCULOSIS.[1]

BY ENOCH V. STODDARD, M.D.,
OF ROCHESTER, N. Y.;
VICE-PRESIDENT OF THE STATE BOARD OF CHARITIES.

LONG continued observation and carefully conducted scientific research have established the fact that consumption, or pulmonary tuberculosis, is not only a universally prevalent disease, but that its specific character places it among the contagia. These two facts, being accepted as proven, suggest the importance of the immediate adoption of measures for the abatement of this extended evil. In the consideration of means for the accomplishment of this end we are made aware that it is not society only which demands consideration or which is involved, but that the State, in its broader supervisory function, is even more directly interested than the merely social organization.

It is a universally accepted aphorism that the strength and permanence of any State depends upon the health and vigor of its citizens, and that anything which may lessen these characteristics correspondingly reacts upon the productive capacities and general welfare of the State. We have thus two points of view from which to examine the relation of the State to any form of disease especially one which is liable to become generally prevalent and to exert a baneful influence upon the health of its communities. The first of these we may designate as sanitary; and the second as the economic standpoint.

The sanitary welfare of the community has for a considerable period been a subject of solicitous and careful consideration. The causes tending to produce disease and to favor its extension have been scrutinized with scientific care; and, when recognized, have been subjected to legislative provisions for their control or removal. There has thus grown up in our communities, and under a general State supervision, a department of public health. Under favoring legislation an elaborately organized system of health boards, with extended powers, has been established in nearly every community in this State. The powers granted by legislation to such boards have been extensive and, in some respects, absolute, with the design of ensuring promptness and efficiency in stamping out those forms of disease which are known to be contagious or infectious. It is only recently, however, that tuberculosis has been recognized as belonging to the class of contagious diseases. This fact assured, it at once becomes necessary for the State to take such measures as shall place this disease under the same restrictions and provisions as are established for other diseases of a contagious character.

A second point of view referred to is an economic one. It has been ascertained by sad experience that one of the common causes of poverty and pauperism is the prevalence of disease by which the individual is deprived of his capacity for self-maintenance, or the bread winner of the family is removed from his place as provider for a number. In either case the State becomes the loser in proportion to the productive capacity and character of the individual suffering from disease. This fact opens a question of great importance to that department of society and State supervision whose function it is to search out the causes and to establish measures for the relief of such conditions. This at once brings into co-operation the health authorities of the State and the department of supervision of its charitable administration.

Viewed from this two-fold standpoint the question becomes a vitally important one, and the inquiry naturally arises, what shall be the policy of the State in dealing with it?

It is already well known that the number of deaths annually occurring in the State of New York from tuberculosis amount to nearly fourteen thousand; while the incipient and chronic cases of disease existing each year reach the startling figure of about sixty thousand. With the knowledge which we now possess of the preventability of this disease, as well as of the poverty directly traceable to it, the importance of the adoption of a definite policy, by the State, looking towards the diminution and the ultimate eradication of this disease is all important.

It has been suggested that legislation be enacted by which the State shall assume the care of all cases of tuberculosis occurring among the poorer classes of our communities, and that to secure this end sanatoria or hospitals be established by the State to which such dependent cases can be sent for care and treatment. From a casual or sentimental view, such a course may recommend itself; but careful consideration of the subject, in its broadest phase, leads to the rejection of a proposition for such universal care. It is known and appreciated by comparatively few that the State of New York, under its present system of charitable administration of public and private benevolence is already contributing to a greater or less extent to the maintainance of one in every two hundred and fifty-one of its population. The impracticability of carrying out so

[1] Read in the discussion on "State Care of Tuberculous Patients" at the annual meeting of the Medical Society of the State of New York, held at Albany, January 30, 31, and February 1, 1900.

extended a system, as has been proposed, of providing for the tuberculosis cases by the State becomes apparent. It would seem, therefore, that the province of the State is not so much to assume the direct and detailed care of such patients as to establish such a system, by well advised legislation, as shall enable the several communities of the State to bear their proper part in the care, each of its own dependent cases.

The conclusion that it is not climate, nor sunshine, nor locality, nor life in the open air, nor medical treatment alone which is necessary for the cure of the tuberculous patient, but *the judicious use of each and all of these agencies in the treatment of each individual case*, is being universally accepted. It is not so much the gathering of the incipient and chronic cases into sanatoria and hospitals, and their maintenance there, which we seek to accomplish, as it is to *educate* the patient in the care of himself, and the public at large in these measures which not only provide for the care of the sick, but for the protection of the community, by instructing its members in the means of prevention as well as of cure.

The province of the State, therefore, would be mainly educational, and only custodial so far as might be necessary to ensure these object lessons in care which might be required by some of its communities whose provisions for such education were limited. Those under whose ministrations the sick and needy fall are well aware of the reluctance which they exhibit in regard to removal from their homes. In our larger municipalities, where numbers of the lower and poorer classes are aggregated closely in unsuitable surroundings, the scourge of tuberculosis is found to be mose prevalent. The aversion of people so situated to removal from their homes to any distant institution, no matter how well appointed or how hopeful a provision may be extended to them for a cure, is an almost insuperable barrier to any efforts which would involve their transfer from the neighborhood of their own home. Such circumstances and conditions suggest the importance of establishing a system, by which the sick of any district can be provided for in a local hospital or sanatorium or in the vicinity of their own homes. The importance of what might be called the home sanatorium becomes more and more evident upon farther study. The State of New York possesses, in its extensive variety of hill, valley and upland, sites in the vicinity of almost every center of population, well adapted for the establishment of such sanatoria. The sick poor are more easily led to seek relief in such an institution than in one necessitating an absence from home and friends and a long journey by public conveyance.

It is held by those who have had extended experience in the care of these cases that the cure of tuberculosis in the home sanatorium is less likely to be followed by a relapse than when the cure is accomplished in a distant locality and different climate.

An equally important consideration connected with the home sanatorium is its educational capacity. Such an establishment immediately becomes a center of instruction for the people among whom it is situated. They not only learn the proper care of the consumptive in such hospital and when sick, but are instructed in the best means to be adopted in the home in order to prevent the entrance and spread of the infecting germ of tuberculosis. Each patient in such a sanatorium, after such stay as may be prescribed by the medical attendant, is returned to his home, not only well instructed in maintaining a proper care of himself, but with a knowledge which becomes at once a source of education to his family and neighbors in the proper preventive and curative treatment of the disease.

These conclusions accepted, the policy of the State in the prevention of tuberculosis does not seem difficult of definition. It involves two propositions: First, a legislative one, by means of which may be established a system of control of those conditions favoring the development and spread of this disease; and, second, a provision for the establishment of its educational functions by instituting one or more sanatoria, by means of which the knowledge of the best methods of treatment and prevention can be generally disseminated.

In outlining a policy to be followed by the State, it must be understood at the outset that reference is had to provisions by the State for *incipient* cases only, chronic cases being provided for by the several communities in which they are found. Such provision is already rendered possible by the law, enacted by the last legislature, providing for the establishment by large municipalities, in their immediate vicinity, of hospitals for the care of pulmonary tuberculosis. If this capacity of local provision for chronic cases is extended to incipient cases, an important part of the remaining problem will be solved. The State already possesses a well and carefuly developed system of protecting the public health. Under existing statutes every city, town and village maintains its board of health. Legislation, extending the powers of such health boards by placing tuberculosis among or in the class of contagious diseases, would at once establish an efficient series of local sanatoria under a carefully devised and expert supervision.

It would not be difficult, therefore, to found a system of state hospitals under the general supervision of the State Board of Health, state hospitals proper being under boards of managers, appointed by the Governor and the Senate, while local hospitals would be managed directly by local boards of health, but being still under a general State supervision. The enactment of a law by the Legislature, containing these provisions, would at once develop a series of local hospitals for the care of incipient as well as chronic cases of tuberculosis, in the vicinity of the great centers of population. These would serve as stimuli to the residents of the smaller towns and villages in the establishment of their own hospitals. There could thus be adopted and enforced in every household,

a policy, in regard to tuberculosis, which would exert a power of prevention sufficient to control the existence and development of this disease, as fully as of smallpox or any other of the contagia.

THE JUSTO-MAJOR PELVIS AS A FACTOR IN THE CAUSATION OF PERINEAL INJURIES.

BY JOSEPH BROWN COOKE, M.D.,
OF NEW YORK;
LATE ATTENDING PHYSICIAN TO ST. MARY'S FREE HOSPITAL FOR CHILDREN, OUT-DOOR DEPARTMENT, ETC.

IT IS, of course, a self-evident fact that among patients with justo-major pelves the obstruction offered to the descent of the fetal head is inversely proportionate to the size of the bony ring through which it has to pass, and that lacerations of the maternal soft parts are apt to occur as a result of precipitate labor or of malpositions of the presenting pole. Nevertheless, it is customary with many practitioners to give a favorable prognosis in such cases, and the patient or her husband is assured that the labor is bound to be easy because the pelvis is usually large and roomy. Such a prognosis is seldom verified in the lying-in chamber, as almost any obstetrician's case-book will show.

Posterior positions of the occiput, face, brow and compound presentations, prolapse of the cord and similar abnormalities all fall to the share of the "large and roomy pelvis," and set at naught the encouraging prognosis given weeks before.

Granting, however, a normal position of the vertex (occiput anterior) the outcome is seldom much better, and it is this class of cases to which particular attention is called. In such the first stage is apt to be tedious, the head does not engage readily, flexion is seldom complete and often rotation is improperly accomplished; the second stage is no better than the first, while, to make a bad matter worse, the maternal soft parts are almost invariably badly lacerated when the head passes through the vulva.

Notwithstanding the fact that with an anesthetic and careful management of the head its passage through the vulva can be controlled exactly, it is difficult to prevent this accident. The most rational explanation thereof seems to be that owing to the abnormally increased caliber of the justo-major pelvis the head does not "mold," and when it is delivered it distends the maternal soft parts to an excessive degree. It has, in fact, all the characteristics of a head in a breech delivery. Of course, if the infant is small the perineum may be saved, but women with justo-major pelves do not as a rule bear small children.

The following brief outline of a case will serve to illustrate this type of labor:

M. T., American, twenty-two years of age, primpara, one of twenty-four children. The patient is a woman of fair height, proportionately well built, strong and healthy. Her external pelvic measurements are:

	Cm.	Average.
External Conjugate	21.5	(20¼)
Ant. Sup. Spines	31.	(26)
Post. Sup. Spines	10.	(9⅛)
Iliac Crests	31.	(29)
Intertrochanteric	33.	(31)

The sacral promontory is well out of reach.

Six days before the birth of her child labor pains began and lasted for about twelve hours. Abdominal examination showed the fetus to be lying in the first position (L. O. A.). By vaginal examination the head was found to be almost resting on the pelvic floor, with the os uteri directed backward toward the sacrum and dilated to a diameter of about 3 cm. The membranes were intact; fetal heart 140. When her pains stopped she was allowed to go on from day to day under the care of a competent nurse, who was instructed to report at once the onset of any untoward symptoms. At the end of six days her pains returned and she was delivered naturally in seven hours. During the latter part of the second stage chloroform was given in sufficient quantity to prevent too rapid expulsion of the head, and every effort was made to save the perineum, which in spite of the utmost care was torn nearly to the sphincter. The child weighed seven and one-quarter pounds and its head was nearly globular, showing no signs of any molding or compression whatsoever. The lacerated tissues were repaired at once.

There is apparently no help for these cases, unless it be episiotomy judiciously performed; a procedure which the writer mentions only to condemn. Beyond this the physician can only bend every effort toward saving the soft parts with well-timed anesthesia and proper manipulation. For the rest, he should give a guarded prognosis and stand ready to perform an immediate and complete perineorrhaphy should circumstances require it.

269 West 138th Street.

REPORT OF BACTERIOLOGICAL INVESTIGATIONS UPON YELLOW FEVER.[1]

BY ARISTIDES AGRAMONTE, M.D.,
ACTING ASSISTANT SURGEON U. S. ARMY.

Preface.—A report upon investigations carried out in Santiago de Cuba in the summer of 1898 was rendered before the work referred to in the present writing was begun. Frequent reference is made to it as "Report, December, 1898."

The bacillus icteroides, claimed by Dr. G. Sanarelli to be the causative agent of yellow fever, received particular attention, and having unexpectedly found it in three instances which certainly were not yellow fever cases, we can the more regret that the amount of work, which was excessive for one single investigator, did not

[1] This report embraces the research work undertaken in the City of Havana by order of the Surgeon General of the United States Army. It was begun early in December, 1898, and suspended in November, 1899; including a period of six weeks spent at Santiago de Cuba during the last epidemic.

allow the planting of material from many other than undisputed cases of yellow fever cadavers.

Hog-cholera, under the name of *pintadilla*, is a disease which prevails in this island to an enormous extent. Its pathogenic organism must be widely disseminated, and I do not doubt that careful cultures from the organs of cases of typhoid, chronic dysentery and the obscure fevers which are endemically met here, would reveal the bacillus icteroides as one of the many secondary invaders in the last septicemic processes.

Introduction.—In the summer of 1897 there appeared before the medical world from the pen of the renowned bacteriologist Giuseppe Sanarelli, a "memoire" upon studies he had made in Montevideo that enabled him to isolate a bacillus which in his opinion was the specific pathogenic organism of yellow fever. The discovery being announced by such a savant and through the columns of the *Annals of the Pasteur Institute of Paris*, it caused profound sensation: the work was published in several languages and in a comparatively short period the scientific world tacitly accepted the claims of Sanarelli and patiently awaited the preparation of the prophylactic serum, which was announced as already undergoing manufacture.

Cultures of Sanarelli's bacillus icteroides were secured in various laboratories and experimental work begun for the purpose of verifying his assertions. Unfortunately, indeed, for science and humanity, the results obtained have been most unsatisfactory; they lack that uniformity which is so essential and constant in all truly scientific facts. Even in the hands of Sanarelli's stanchest supporters this organism has behaved differently from the way described by the discoverer (DeLacerda and Ramos., *Archiv. de Med. Experimentale*, May, 1899); the frequency with which it has been found in the yellow fever cadavers varies with different investigators.

At the time of the epidemic which overran the littoral of Mississippi and Louisiana in the fall of 1897 much research was undertaken with the results herein briefly summarized. Dr. O. L. Pothier in his report of work performed at the Isolation Hospital, New Orleans, La. (*Jour. Am. Med. Assoc.*, April 16, 1898, p. 884-888) claims to have found Sanarelli's bacillus in only three out of fifty-one yellow fever autopsies; yet such result leads him to conclude that this organism is the "special cause of yellow fever." But that is not all, it happens that he did not isolate bacillus icteroides, for the organism which he describes required from 3.5 c.c. to 5 c.c. of a 24-hour bouillon culture to kill a rabbit; and a dog injected with 5 c.c. of a 24-hour bouillon culture, intravenously, survived even after a subsequent injection of 10 c.c., while the bacillus claimed by Sanarelli as his discovery proves fatal to rabbits in doses of 1 c.c. or 1.5 c.c., and to dogs from 3 c.c. to 5 c.c.

Drs. Wasdin and Geddings of the Marine Hospital Service, in a preliminary and separate report of the work performed during the same epidemic (Public Health Reports, Washington, D. C., Nov., 1898, vol. xiii., No. 45), give what at first glance would appear as more satisfactory results. They claim to have found the bacillus icteroides in thirteen out of sixteen cultures made from yellow fever cadavers (the number not stated) and declare that their results "indicate that the bacillus icteroides of Sanarelli is the specific agent in the causation of yellow fever." (Geddings.)

In July of the current year we were presented with a complete and final report from these gentlemen of their original investigations upon the "Cause of Yellow Fever," in which, with evidently genuine candor, it is claimed that "in the blood of yellow fever cases extracted during life bacillus icteroides has been found in thirteen of the fourteen cases, with one negative, a per cent. of 92.85." (Report on Cause of Yellow Fever, p. 25. Also MEDICAL NEWS, Aug. 26, 1899, p. 266.)

To the average reader this statement would not seem at all remarkable if it were not for the fact that the result was reached, not through skillful and painstaking technic, but the reverse. All that Drs. Wasdin and Geddings had to do was to prick the lobe of the ear, collect the blood therefrom in glass bulbs, plant in bouillon and after a short period (not stated) plate from these cultures; and lo! bacillus icteroides occurred in every case but one. The degree of contamination which takes place by such procedure can easily be appreciated by the merest tyro in bacteriology. How Drs. Wasdin and Geddings can place any reliance upon results thus obtained is something that we cannot explain, knowing as we do their extensive scientific attainments.

In the same report we find this statement: "In this negative case Dr. Meacham obtained bacillus icteroides post-mortem." The writer is in a position to correct this mistake having received from Major Meacham a culture of the organism which he believed to be bacillus icteroides and which he had isolated from the case of Manuel Corujo (No. 9 in the Wasdin-Geddings Report) and *not* from Pedro Quintela (No. 14 in the Report) as stated by Wasdin and Geddings. On page 25 of their report, Drs. Wasdin and Geddings say, "In thirteen instances we isolated bacillus icteroides in pure culture." This statement is misleading, to say the least. Once the organism is isolated it must necessarily be in pure culture, or else it will *not* be *isolated*. If the remark quoted is intended to convey the idea that bacillus icteroides *occurred* in pure culture, then the statement is at fault, indeed, for in the same report we read that in Case No. 1, it was associated "with bacillus proteus vulgaris and bacillus coli[2];" in Case No. 5, with "bacillus coli;" in Case No. 7, they obtained at the same time colonies "also of two other organisms, one a colon;" in Case No. 10 it

[2] The bacillus coli (Escherich) Mig. is used throughout this report for the bacterium coli commune of Escherich.—Migula, p. 734.

occurred "together with a variety of bacillus coli;" in Case No. 22, the blood gave "mixed cultures of bacillus icteroides and bacillus coli." When associated with other organisms it could not have been present in pure cultures.

The fifth "conclusion" arrived at by the Commission (Report on the Cause of Yellow Fever) is to the effect that "cases do occur in which the bacillus icteroides cannot be found in the blood or organs in which it might be deposited." Yet, the Commission was so fortunate that in the fourteen cases examined here (Havana) it found the bacillus icteroides in the blood or in the organs where it had been deposited therefrom. Whence was the above quoted conclusion drawn? From the failure of others to find it?

The writer does not propose to make a detailed criticism here of the "Report on the Cause of Yellow Fever," but as his results in spite of apparently more careful methods than those employed by Drs. Wasdin and Geddings have been so very much unlike the achievements of these gentlemen, he thinks it not inopportune to call attention to the assertions and contradictory statements quoted above.

The fact that bacillus icteroides is often agglutinated and its motility arrested by the normal serum of the horse, dog, rabbit and other animals as well as by the serum of many persons who never had yellow fever, which fact has been ascertained by Novy,[1] Wasdin and Geddings,[2] and by the writer, certainly argues very strongly against the specificity of this organism in yellow fever. The fact that it promptly agglutinates by the action of hog-cholera serum in very high dilution again speaks most eloquently against the imputed relation it is said to bear upon the causation of yellow fever; Drs. Reed and Carroll have clearly established a close relationship between bacillus icteroides and bacillus cholera suis.[3] Finally, the incontrovertible fact that no protection to infection by bacillus icteroides is afforded by the serum of real yellow fever convalescents seems to very pointedly indicate that the relations between this organism and the disease in question must be of a most indirect or evanescent character.

In following the course of his bacteriologic investigations, the writer was compelled to abandon the digestive and respiratory tracts, which, upon planting therefrom, invariably produced such luxuriant growths as to very materially obstruct the process of isolation and classification; cultures were made principally from the blood during life, the heart blood, liver, spleen, kidney, bile and urine, the methods employed being described in the text. In the report handed to you in December, 1898, we said: "The work I have the pleasure to record here is far from ended," etc. Allow me to add to-day that the work here recorded is still "far from ended," moreover, that it will never be, until every investigator understands that his duty is not to join the ranks that will promote personal aggrandizement, that he must not undertake research with preconceived conclusions, but that his labor must ever lie in the narrow path of unalloyed scientific truth. The writer must confess that the *cause* of yellow fever has escaped him; but the series of disappointments to which this research has subjected him are certainly amply repaid by the promising results derived from his attempts at serum-therapy.

Conclusions.—1. The specific pathogenic microorganism of yellow fever is as yet an unknown entity in spite of the work reported by various observers; apparently, new methods of cultivation must be initiated or new culture media devised in future research.

2. The bacillus icteroides of Sanarelli, lately (1897) asserted to be the causative agent of yellow fever, is no more concerned in the production of this disease than the common colon bacilli which are constantly found in the blood and viscera of individuals suffering or dead from yellow fever.

3. When approved bacteriological methods are employed, the bacillus of Sanarelli does not, as a rule, appear in cultures from the blood of yellow fever patients.

4. Bacillus icteroides may be and has been found present in the tissues of cadavers dead from other diseases, neither allied nor similar to yellow fever.

5. The bacillus of Sanarelli, when subjected to agglutination tests, is not affected by the serum of yellow fever patients or convalescents.

6. The serum of convalescent yellow fever cases affords absolutely no protection against infection by the bacillus of Sanarelli.

7. None of the organisms thus far isolated from yellow fever cases can be considered as the pathogenic agent of the disease.

8. Experimental evidence has demonstrated that the serum of individuals convalescing from yellow fever, or who lately suffered an attack of this disease, will very materially and favorably affect those actually under the influence of the infection if injected under the skin, on or before the fourth day after the invasion; but that it requires further study to determine the protective power of different sera and the dosage.

9. From the experimental evidence above referred to, we are led to believe that the subcutaneous injection of convalescent's serum will convey immunity to individuals whom we to-day consider as susceptible to the disease.

Material for Research.—Material for research was obtained from cases of yellow fever during life at various stages of the disease; blood was drawn by pricking the ear-lobe for the purposes of planting and testing its clumping power, and from a vein at the elbow-joint; tissues and blood from various organs at autopsies were also obtained, some were planted, others were used in attempts at infecting animals. Later in our investigations we drew blood from convalescent yellow fever patients; serum was thus obtained

[1] MEDICAL NEWS, September 10, 1898.
[2] "Report on Cause of Yellow Fever," p. 19, 24, and 78-79.
[3] MEDICAL NEWS, September 9, 1899.

with which to test its curative properties upon yellow fever cases and its protective power upon animals inoculated with some of the organisms derived from our cultures. A large number of cultures were made at the City Morgue from cases of sudden death, and some from necropsies other than of yellow fever cases.

Ear-Tip Blood.—The method of obtaining blood from the ear-tip for bacteriological research is one that is very generally and properly condemned; in spite of this fact, and the knowledge that the process is faulty and unreliable, we hour; after an interval of from six to eight hours this was plated. In some few instances we plated directly from the blood. From reading Drs. Wasdin and Geddings' "Report on the Cause of Yellow Fever," the writer is convinced that he washed off bacillus icteroides from the ear-lobe of every one of the following cases in which the "results" appear as copied directly from our notes. (See table I.)

From Nos. 4 and 20 we obtained a micro-organism very much like bacillus icteroides; its effect upon various culture media was identical

TABLE I.

No.	Name.	Age.	Date.	Day of Illness.	Result.
1	Th. B. Doane.....	52 yrs.	Jan. 9	4th.	Two non-pathogenic bacilli.
2	Arth. Atwood.....	23 "	Feb. 11	4th.	Not yellow fever.
3	Pat Smith	23 "	" 13	9th.	Not yellow fever; colon bacillus tetrad.
4	XX. Bradshaw.....	.....	" 26	10th.	Not yellow fever; small bacillus.
5	Man. Corujo.....	20 yrs.	Mar. 22	8th.	Tetrads; chromogenic, etc.
6	Adres Sauter.....	20 "	April 6	6th.	Not yellow fever; contaminated.
7	Pedro Quintela	40 "	" 22	6th.	Colonies of two liquefying bacilli; micrococi, etc.
"	" "	.....	" 24	8th.	A colon bacillus; a chromogenic coccus; mould.
8	Kauna Sessin	.....	" 21	4th.	Micrococ. tetragenous; moulds.
9	P. Rodriguez	36 yrs.	May 15	5th.	One non-motile bac.; staphylococci.
10	Higinoi Guerra	14 "	June 4	2d.	Not yellow fever; contaminated.
11	A. J. Bathon	27 "	" 8	6th.	Not yellow fever; non-motile bac.
12	Rob. Stewart	33 "	" 12	5th.	All cultures contaminated by moulds.
"	" "	.....	" 16	9th.	A staphylococ.; two non-motile bacilli not pathogenic.
13	Wm. Kehrer	27 yrs.(?)	" 14	4th.	A tetracoccus and a long saprophytic bacillus.
14	Geo. Woods	22 "	July 21	6th.	One mould; two cocci; one chromogenic bacillus.
15	J. G. Thatcher.....	38 "	" 22	12th.	Mould contamination.
16	Mike Deveny	30 "	" 22	4th.	Staphylococ.; red colony.
17	Lant Sears	35 "	" 22	5th.	A non-motile bac.; mould.
18	Wm. Demuth	24 "	" 21	3d.	Tetrad; mould.
19	Wm. Shew	25 "	" 18	9th.	Two liquefying cocci.
20	W. J. Mooney	37 "	" 31	4th.	Staphylococci; a colon bacillis; mould.
21	J. A. Hays	20 "	" 31	4th.	Staphylococcus aureus.
22	Luis Colome.....	27 "	" 31	7th.	Tetracoccus; a chromogenic bacillus.
"	" "	.....	Aug. 3	10th.	Colon bac.; liquefying cocci.
23	J. J. Dougherty	29 yrs.	" 15	7th.	A non-motile bac.; mould.
24	B. Fowler.....	31 "	" 15	8th.	Chromogenic bacteria.
25	A. Weidner	33 "	" 15	5th.	Chromogenic bacteria.
26	Tim Healy	27 "	" 15	5th.	Staphyloc.; a non-motile bac.
27	S. Scanlan	.....	" 18	2d.	Large micrococci; mould.
"	" "	.....	" 21	5th.	A chromogenic organism.
28	H. R. Clay.....	27 yrs.	" 23	3d.	A liquefying coccus; a non-motile bacillus.
29	Rich. Graves	31 "	" 28	4th.	A colon bac.; staphylococci.
30	Ed. Vragel	19 "	" 27	4th.	Chromogenic bacteria.
"	" "	.....	" 29	6th.	Tetracoccus; a red colony.
31	Jess. Hilton	22 yrs.	Sept. 6	4th.	A long bacillus and two chromogenic organisms.
32	J. Thorsby	24 "	" 4	5th.	Mould contamination.
"	" "	.....	" 6	7th.	Micrococci; a colon bacillus.
33	Chas. Mitchell.....	30 yrs.	" 6	3d.	A liquefying coccus; mould.
"	" "	.....	" 8	5th.	A colon bac.; staphylococci.
34	Dan Coleman.....	53 yrs.	" 8	6th.	Tetrad; staphylococci; mould.
35	Chas. Rodgers	24 "	" 8	5th.	Much contaminated.
36	S. Fichman.....	29 "	" 14	4th.	Staphylococcus aureus.
"	" "	.....	" 16	6th.	A non-motile bac.; micrococci.
37	H. Sutherland.....	21 yrs.	Oct. 10	4th.	Badly contaminated.
"	" "	.....	" 12	6th.	Micrococci; a colon bac.

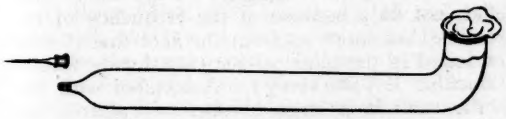
were induced to persevere upon its use by the rumor, lately confirmed, that Drs. Wasdin and Geddings, then engaged in the same work as the writer, were securing excellent results from it, isolating the bacillus icteroides in every case in which the blood was thus procured. Our method was to wash the lobe of the ear with alcohol and sterile absorbent cotton, pass the point of a lancet through the flame of an alcohol lamp, prick the ear with it, receive the issuing blood on the end of a sterile capillary glass tube, immediately sealing it at the flame; the two or three drops thus obtained were planted in bouillon within a half

with that produced by this bacillus, but it gave large quantities of gas with saccharose and glucose bouillon and its pathogenic action was less intense than that of bacillus icteroides. Aside from these two cases, there was no one organism obtained from any of the others that required more than a cursory examination to determine its extraneous origin and none was sufficiently constant to deserve even the suspicion that it was at all related to the disease. From this we conclude that blood taken from the ear-tip, in spite of cleansing processes such as may be carried out at the patient's bed-side, is unfit for anything

more than microscopical examination or agglutination tests, that planting from such blood will in the majority of instances be contaminated, and that at all events the results thus obtained will always be open to doubt and adverse criticism.

Venous Blood.—The conviction of the worthlessness of ear-tip blood as material for research induced us to devise some means whereby to obtain blood during life in a manner that would preclude all probability of contamination. With this object in view we had made a number of glass tubes (Fig. 1) coming to a point with a

Fig. 1.



Instrument for Collecting Blood.

ground tip to which the platino-iridium needle is attached. The curved end is for the purpose of preventing the blood as it enters the horizontal tube from coming in contact with the cotton plug. The glass tube with its end cotton-plugged is sterilized, wrapped in gauze or filter paper. At the moment of using the needle is held by the point and the other end subjected to the flame of an alcohol lamp; the glass tube is unwrapped and the needle is fixed to the ground tip; the whole needle is then held in the flame until it becomes red hot, when we shall have a perfectly sterile tube from the point of the needle to the cotton plug in the curved glass tube. The bend of the elbow having been made surgically aseptic by the use of soap and water, bichloride solution and ether, pressure is made above while the needle is introduced into any of the superficial veins that will consequently swell up; once into the vein, the blood will readily flow through the needle into the glass tube and from one to six cubic centimeters may be thus collected.

The culture media may be carried to the bedside, or the blood safely taken into the laboratory and planted; one or two drops are allowed to fall into each tube. This method of securing aseptic blood has given uniform results in our hands. The pain inflicted is not greater than that produced by the ear-tip process and no greater care of the puncture is required, while the safeguards by which it is surrounded will necessarily inspire confidence in the results derived from its employment.

Out of a total of 281 agar tubes there were but 8 contaminated; of 25 milk plantings only one contamination, and of 49 bouillon tubes, 2 became contaminated. In not a single instance did the bacillus icteroides make its appearance. The organisms which developed in our culture media were thoroughly studied, with the following results: In case No. 4, one agar tube contaminated by staphylococcus pyogenes albus. In case No. 7, three agar tubes contaminated by a bacillus which liquefies gelatine; the same organism in all the tubes; 3 c.c. of a bouillon culture failed to kill a guinea-pig weighing 325 grams. In case No. 17, one milk and two agar tubes contaminated by a large non-liquefying micrococcus which produces endospores; subcutaneous injection developed abscesses, localized. In case No. 21, two bouillon and one agar tubes contaminated by mould. In case No. 27, one agar tube contaminated by mould, and a bacillus which forms filaments of unusual length, coagulates milk and renders a decided acid reaction to all culture media. None of the organisms obtained can be accused of being the causative agent of yellow fever. The result is disappointing, indeed, but such has been this investigation from the beginning; the only satisfaction that can be derived from it lies in the consciousness of its truth and a confidence in the methods employed.

Necropsies upon Yellow Fever Cadavers.—We believe that the history of each case autopsied, if detailed here, would make this report unnecessarily extended. The facts placed before each name in the following list will enable any one to verify them, if so inclined, by referring to the records of the Yellow Fever Hospital at Santiago de Cuba and Las Animas Hospital at Havana. Sections of tissues from all these cases were sent, from time to time, to the Curator of the Army Medical Museum, Washington, for study at the Pathological Laboratory of that institution. For the sake of brevity the notes made upon the pathological lesions encountered are also omitted; suffice it to say that the degree of

TABLE II.

No.	Name.	Day of Illness.	Amount Drawn.	Bouillon.	Milk.	Agar.
1	Manuel Corujo..	8th.	3 c.c.	.....	.....	14 tubes.
2	Geo. Woods	7th.	5 c.c.	.....	.....	6 "
3	Mike Deveny....	4th.	5 c.c.	.....	.....	12 "
4	Arth. Hayes	6th.	3 c.c.	.....	.....	10 "
5	Robt. Cole.....	7th.	5 c.c.	5 tubes.	.....	12 "
6	T. H. Buchanan.	3d.	4 c.c.	.....	.....	20 "
7	G. P. Thomas ..	9th.	3 c.c.	8 tubes.	.....	11 "
8	Land Sears	5th.	5 c.c.	.....	.....	14 "
9	Wm. Demuth...	3d.	3 c.c.	.....	.....	8 "
10	B. Dadd.....	4th.	5 c.c.	.....	.....	9 "
11	Wm. Shew	5th.	3 c.c.	.....	.....	21 "
12	Wm. Mooney ...	3d.	3 c.c.	.....	.....	12 "
13	J. A. Hays.....	5th.	5 c.c.	.....	.....	16 "
14	Luis Colome....	4th.	7 c.c.	.....	.....	8 "
15	J. G. Thatcher..	5th.	5 c.c.	.....	.....	10 "
16	J. J. Dougherty .	7th.	2 c.c.	.....	.....	8 "
17	B. Fowler	5th.	4 c.c.	.....	4 tubes.	12 "
18	A. Weidner.....	3d.	3 c.c.	3 tubes.	.....	6 "
19	Tim Healy.....	5th.	2 c.c.	.....	2 tubes.	4 "
20	S. Scanlan	6th.	6 c.c.	4 tubes.	4 "	8 "
21	H. R. Clay.....	9th.	5 c.c.	6 "	.....	9 "
22	Ch. Allison	8th.	2 c.c.	4 "	.....	.....
23	Rich. Graves....	7th.	3 c.c.	2 "	.....	7 "
24	Ed. Vragel	8th.	2 c.c.	.....	.....	4 "
25	J. Thorsby.....	9th.	3 c.c.	.....	3 tubes.	6 "
26	Ch. Mitchell	7th.	2 c.c.	.....	.....	8 "
27	Max Thompson .	5th.	3 c.c.	3 tubes.	4 tubes.	4 "
28	Ch. Rodgers	8th.	5 c.c.	3 "	4 "	4 "
29	S. Fichman	3d.	4 c.c.	3 "	.....	8 "
30	E. Bubeck	3d.	4 c.c.	6 "	.....	6 "
31	Dan. Coleman ..	3d.	3 c.c.	2 "	4 tubes.	4 "

fatty degeneration of the liver was intense and "*black vomit*" was present in the stomach of *all* of them. Other lesions, also common to all, varied in the degree of their intensity; such were the heart infiltration, renal affection, engorged vessels, internal hemorrhages, icteric skin, etc. The disease in all these cases followed a typical course, as evidenced by its onset, development and the pathological lesions it produced (See table III.)

TABLE III.

No.	Name.	Rank and Regiment.	Age.	Admitted.	Died.	Time after Death of Autopsy.
1	F. L. Johnson ..	Priv. 2, 5th Inf.	27 yrs.	July 12	July 17	3 hrs.
2	Sam Griffith	Civilian.	25 "	" 13	" 14	3 "
3	Wm. Stewart ...	Civilian.	24 "	" 13	" 14	12 "
4	Wm. Turney ...	Private H'l C'ps	34 "	" 12	" 15	2 "
5	Geo. Olsen	Civilian.	35 "	" 13	" 19	1 "
6	Arthur Hayes...	Sgt.Com. Dept.	44 "	" 13	" 20	5 "
7	Robt. H. Cole ..	Civilian.	30 "	" 15	" 23	3 "
8	John Mack	Civilian.	32 "	" 15	" 28	11 "
9	John Fulley	Civilian.	38 "	" 29	" 29	1 "
10	James M. Hays..	Civilian.	20 "	" 30	Aug. 2	1 "
11	Wm. J. Mooney.	Civilian.	37 "	" 29	" 4	8 "
12	D. V. Fernandez.	Civilian.	30 "	Aug. 1;	" 18	6 "
13	Reed Lucas.....	Priv. K, 2d Art'y	19 "	" 22	" 26	2 "
14	Cliff Calhoun ...	Priv. B, 2d Art'y	33 "	" 24	" 28	8 "
15	Clyde W. Sheets.	Priv. I, 2d Art'y	26 "	" 30	Sept. 3	9 "
16	N. Goodwin	Srgt. I, 2d Art'y	25 "	Sep. 2	" 7	3 "
17	David Peebles ..	Civilian.	28 "	" 10	" 13	2 "
18	Ramon Borbolla.	Civilian.	21 "	" 13	" 18	10 "
19	Henry Olsen....	Civilian.	45 "	Oct. 7	Oct. 7	3 "
20	John Corey.....	Civilian.	25 "	" 8	" 10	3 "
21	Th. C. Smith...	Civilian.	21 "	" 23	" 27	12 "
22	B. F. Markwood.	Civilian.	24 "	" 24	" 28	7 "
23	Henry M. Land.	Civilian.	24 "	Nov. 3	Nov. 12	12 "

The first eleven cases occurred at Santiago de Cuba, the twelve that followed at Havana.

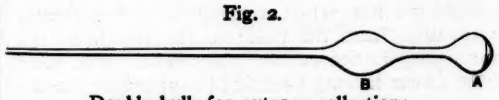
The conditions under which the autopsies were performed at Santiago de Cuba compelled us to refrain from attempting any cultures by the side of the cadaver and made it necessary to collect the material, in capillary glass tubes, and then take it into the laboratory tent, there to plant it in the culture media. For this purpose we made use of double-bulbed glass tubes (Fig. 2). After sterilizing the surface of the organ by means of a heated blade, the end of the capillary tube was broken off, passed through the flame, the bulb, *A*, heated and then the point introduced into the organ; by working the glass tube back and forth, considerable tissue and blood is made to enter into the bulb *B*, promoted by the cooling of the air in bulb *A*. When a sufficient amount is obtained, the end of the tube is sealed at the flame and the material is ready for planting. By having the double bulb, the material does not come in contact with the heated glass but remains at the first expansion in the tube.

Bacillus coli.—This organism, or rather some member of this group, was present in the cultures from every one of the autopsies above recorded. It was constantly found in the liver; in 8 cases (Nos. 1, 3, 4, 7, 9, 14, 21, 23) it occurred in cultures from the heart-blood; it was recognized in cultures from the kidney of 6 cases (Nos. 1, 2, 4, 5, 8, 20), the spleen of 4 cases (Nos. 4, 7, 11, 16), and the urine of three (Nos. 2, 9, 10).

Both motile and non-motile forms were isolated. The colon bacillus, like the majority of the organisms here described, must be one of the many invaders of the circulation at the last moments of the individual's life; we are led to this belief, not only because of the frequency of its presence, but more so from the fact that it was not found in the blood of patients during life.

Bacillus X (Sternberg).—Associated with the bacillus coli in a large number of cultures, its presence being recognized in some instances only after passing through guinea-pigs, was the bacillus X of Sternberg. This organism presented peculiar motility in some cultures while in others it occurred as a non-motile bacillus. It was classified principally from its pathogenic action on guinea-pigs which, when inoculated with pure cultures of bacillus coli, usually recovered; when these cultures contained bacillus X, a fatal result was the rule. It becomes deprived of its motility with great readiness, sometimes within a period of a few days. Passing through susceptible animals will not restore locomotion. It is somewhat larger than the common colon bacillus; it stains readily by the aniline colors; retains the stain by Gram's method; grows easily in the ordinary culture media; does not liquefy gelatine. It is pathogenic to guinea-pigs and rabbits in intraperitoneal injections of from 1 c.c. to 3 c.c. of 24-hour bouillon culture. It was obtained in eleven autopsies, as follows: In the liver of six (Nos. 2, 3, 8, 11, 14 and 16); in the spleen of three (Nos. 2, 5 and 9); in the kidney of one (No. 17); in the urine of three (Nos. 15, 17 and 21) and in the blood of No. 13.

Fig. 2.



Double bulb for autopsy collections.

Drs. Wasdin and Geddings claim to have isolated this organism from the stools, urine and blood of a case of yellow fever,[1] but they add "called by Sternberg X, and by Archinard A and B." The two organisms referred to are as unlike as bacillus X and bacillus icteroides, and no one before has ever claimed their identity.

Bacillus pyocyaneus.—This organism, whose description we shall but briefly outline here, was obtained in cultures made from autopsies Nos. 1, 8, 14, 19, 20, 21, and 23. It is a short, motile bacillus; it grows in bouillon, potato, agar and

[1] Report on Cause of Yellow Fever, p. 16.

gelatine, liquefying this last medium in two or three days after planting. It gives to agar and gelatine, sometimes to potato, a light fluorescent greenish tint. Some of the organisms here classified as bacillus pyocyaneus may have been bacillus fluorescens liquefaciens (Sternberg), as no animal inoculations were undertaken except in two instances (Nos. 19 and 21). The organism was pathogenic to guinea-pigs and rabbits in subcutaneous injections of 0.5 c.c. or 1 c.c. of a 24-hour bouillon culture.

Bacillus icteroides (*Sanarelli*).—The bacillus icteroides occurred in seven autopsies out of twenty-three (Nos. 5, 6, 10, 11, 15, 16 and 23) making an average of 30.43 per cent. Its frequency in the organs was as follows: In cultures from the liver and heart-blood of No. 5; from the liver and spleen of No. 6; from the liver and kidney of No. 10; from the kidney, blood and urine of No. 11; from the liver and pericardial fluid of No. 15; from the kidney of No. 16; from the liver and spleen of No. 23. Hence it will be seen that it was present in the liver of 5 cases, heart-blood of 2 cases, spleen of 2 cases, kidney of 3 cases and pericardial fluid of 1 case. We have been surprised at the comparative scarcity with which this organism has developed in our cultures, when, according to the report of the Marine Hospital Service Commission (Drs. Wasdin and Geddings), it was present at some time or other in the blood of all (14) cases of yellow fever that were examined, but one. Every one of our cultures was closely searched for evidences of this bacillus, and the methods we employed towards its discovery were those most highly approved of by bacteriologic technic. If we ever left a colony without thorough examination or classification, it was because we found it composed of micrococci or non-motile bacilli; while on the other hand much time was spent upon motile bacilli which at all resembled in their cultural characteristics the bacillus icteroides That this organism is not to be found in yellow fever as frequently as Drs. Wasdin and Geddings would have us believe is shown by the evidence of Sanarelli's own supporters, Drs. De Lacerda and Ramos,[1] who vainly sought for it during last winter's epidemic in Rio de Janeiro. They say: "*Mais il faut dire, avant cela, que l'un de nous* (*M. Ramos*) *a fait des tentatives réitérées dans le but d'isoler du cadavre le bacille de Sanarelli, sans y réussir.*"

These gentlemen have found decided discrepancies between Sanarelli's description of the organism, and the way it has behaved in their hands; in the article referred to above, they say (p. 384): "*Malgré toute notre bonne volonté, il faut bien dire, nous n'avons pas pu trouver cette forme, dite spécifique, des colonies, dans un nombre assez grand de cultures, soit en gelatine, soit en gélose.*" Sanarelli pretends to explain this by claiming unusual "pléomorphisme" for bacillus icteroides.

[1] "Le Bacille Icteroide et sa Toxine," Arch. de Med. Exper. et d'Anat. Path., Vol. XI., No. 3, May, 1899.

The organism which we isolated from these autopsies is a small bacillus that stains readily with the ordinary stains and gives up the color with Gram's method. It is motile, aerobic (facultative anaerobe), and grows in the usual culture media, producing gas in glucose bouillon. It is pathogenic to guinea-pigs in subcutaneous injections of from 0.3 c.c. to 1 c.c. and also to rabbits and dogs, the latter dying from an intravenous inoculation of 6 c.c. The lesions it produces are such as are found with many other organisms; now and then, in the liver of guinea-pigs, we have observed the focal necroses first described by Dr. Reed of the Army Medical Museum Laboratory, Washington, D. C. We have not engaged in experiments to ascertain its connection with the hog-cholera bacillus. That a close relation between them must exist is made evident by the researches of Reed and Carroll.[1] Bacillus icteroides was isolated by us in 33.33 per cent. of the cases examined at Santiago de Cuba in the summer of 1898.[2]

Bacillus acidiformans.—This was present in autopsies Nos. 12, 20 and 21; obtained in cultures from the livers of these cases. It is a non-motile, rather large bacillus; it quickly acidifies the culture media forming gas bubbles in gelatine stick cultures. It had a decided action upon litmus milk, a heavy growth on agar slants; its pathogenic power was not determined.

Staphylococcus pyogenes aureus.—This occurred in cultures from the liver of autopsy No. 3, but has not been met with in any other examination.

Staphylococcus pyogenes albus.—This was obtained in cultures from the liver of case No. 12. It has frequently occurred as a contamination from the surface of the body or from the air.

Chromogenic bacteria from air contamination were also found.

Anaerobic cultures were made exclusively from some of the Havana autopsies; particularly from cases Nos. 14, 16, 17, 21 and 22.

The method employed has generally been the substitution of the air in the culture tube and media by hydrogen gas, then sealing the test tube at the blow-pipe. In this manner several growths have been developed; nearly all of them were identified with like organisms in our aerobic cultures, while only two bacilli developed that may be said to have been strict anaerobes: one of them was undoubtedly the *bacillus cadaveris of Sternberg.* This was present in cultures from the livers of autopsies Nos. 14 and 21. The growth was obtained in plain-agar slants and stick cultures. The organism isolated was afterwards cultivated in glycerine agar (2 per cent). A subcutaneous injection proved fatal to three guinea-pigs. Two others injected with the same organism recovered.

A Sporulating Bacillus.—This was present in the liver of No. 21. The original growth was

[1] MEDICAL NEWS, September 9, 1899.
[2] Author's Report, December, 1898.

obtained in a plain-agar tube stick culture, treated as above outlined. It developed alongside of bacillus cadaveris, producing whiter and less granular growth. It is larger and more slender than bacillus cadaveris, and forms spores which resist the action of 80° C. for thirty minutes. It is non-motile and strictly anaerobic. It is apparently non-pathogenic, its subcutaneous injection of guinea-pigs produce edema and abscess with very foul odor.

Autopsies upon Other Than Yellow-Fever Cadavers.

As mentioned in the beginning of this report, the writer endeavored to obtain permission to perform autopsies upon cases dead from other diseases than yellow fever, but the amount of work which came upon us at the early part of the summer very materially prevented the possibility of research in other channels. As it is, numerous cultures were made at the city morgue from cases of sudden death. Some of the bodies were allowed to remain on the table for too long a period of time to be of any use as bacteriological material, but in most instances the autopsy was made a few hours after death. The number of organisms isolated is greater than we would care to even outline here and as the work was undertaken for the sole purpose of finding bacillus icteroides, if present, no time was wasted upon any single species that showed the slightest discrepancy with any of the well-known characteristics of this organism. It was present in one of them. Besides the sudden death cases, cultures were made from eight other autopsies; the bacillus icteroides of Sanarelli was found in two of them, making in all three cases in which there was not the barest possibility of yellow fever infection.

They were as follows:

February 13, 1899.—At the city morgue, the body of a white man about thirty years of age, had died as a result of stab wound of the abdomen. Upon opening the peritoneal cavity it was found to contain a large quantity of purulent serum, the intestines being matted together with plastic exudate. Cultures were made from the liver and spleen only, upon six agar slants. On the following day three tubes were discarded, the degree of contamination did not warrant the time that would be required in isolation and classification; from the other cultures, two from the liver and one from the spleen, three organisms were plainly isolated: (1) Bacillus coli communis, (2) bacillus icteroides, and (3) staphylococcus aureus. The patient was a native and had been perfectly well until two days before, when he was stabbed.

February 15, 1899.—Patrick Smith, private, Company B., 8th U. S. Infantry, died at 11 A. M. The autopsy was performed by the writer at 1:30 P. M., in the presence of Drs. Wasdin, Geddings and Menocal of the Marine Hospital Service, Majors Gorgas, Davis and Ducker of the Army, Assistant Surgeon Truby, who treated the man during his illness, Dr. Porto, director of the city morgue, where the autopsy was made, and Drs. Cordova, Carvallo and Castro, the last two gentlemen being the coroners on duty at the time. Patrick Smith was admitted to the Regimental Hospital at La Punta on February 4th, complaining of having felt sick for about a week, which he attributed to malaria, having suffered from this disease in Santiago the previous summer; he was quite anemic, there was some albumin in the urine, the temperature kept around 103° F., the pulse was always high, above 100 beats per minute. During his illness he had liquid stools, yellow, and marked adynamia; no vomiting took place nor was there any epigastric tenderness except upon forcible pressure. We saw the case for the first time on the morning of the 10th, as it was suspected that he was suffering from yellow fever; on the 11th we took blood from the ear-tip and planted it with the results already mentioned above. (See ear-tip blood.) We again saw the patient on the 12th and every day afterwards until his death, eleven days after admission to the hospital. We never believed the man had yellow fever, although we admitted that the case was obscure until later, when we learned that there was a slight epidemic of typhoid fever in Company B.

We take special pains in describing this case, because in the "Report on the Cause of Yellow Fever" Drs. Wasdin and Geddings give this as a typical (!) yellow fever case of "serious type and prognosed death within forty-eight hours" (loc. cit., p. 14), which prognosis was realized five days afterwards.

The lesions encountered were as follows (taken from our notes): The body was emaciated, and its color that of the cadaver of anemic individuals; the gums were pale, the sclerotics had a slight yellowish tint. There were hypostatic congestions on the neck, trunk and extremities; on section, the tissues were found very dry. The liver was very much enlarged, of a purplish hue, with a hard, glistening, smooth surface, and absolutely no evidence of fatty degeneration, a congested hyperplastic liver such as is found in autopsies upon chronic malarial cases. The cut surfaces were smooth and bled freely. The spleen was the size of a man's head, hard, congested, of an ashy-blue color. If these two lesions alone had been met with, the case would have been declared a victim of the malarial parasite; they were typical, except for the great extent to which the organs were involved. The stomach was slightly dilated; the mesenteric vessels rather full; it contained absolutely nothing but undigested food (milk) and mucus; the mucous membrane was pale except at the posterior surface, where there was some hypostatic congestion; it was also edematous and easily torn in manipulation; there was no submucous extravasation nor any sign of any vascular disintegration. The duodenum contained the same liquid food; the mucous membrane was pale, except at

the dependent portion where there occurred hypostatic congestions. The small intestine was examined throughout its whole length; at its lower portion it contained semi-solid fecal matter of a pale-yellow color. At short and regular intervals, corresponding with the intestinal coils, there were areas of hypostatic congestion which were thought by some one present to have been submucous extravasations, but upon section were found to be as above stated, purely congestive areas which probably began to form long before the patient's death, he having been in an adynamic condition for several day previous to the fatal termination of his disease. The mucous membrane was puffy and particularly near the ileocecal valve; Peyer's patches, although visible, cannot be said to have been enlarged; there were a few swollen mesenteric glands in this region.

The colon contained the same pale-yellow feces, and aside from a friable eroded mucous membrane showed no other lesion of apparent importance. From the esophagus to the anus no evidence of the slightest free hemorrhage was encountered. The kidney was slightly enlarged and congested, the seat of a subacute interstitial nephritis. The capsule was not adherent. The pericardium contained a small amount of serous fluid. The heart contained much blood, the walls were rather soft, but there were no evidences of fatty degeneration. No engorgement of its vessels was present, the vasa vasorum at the base were not enlarged; the endocardium was normal; a weak heart and nothing else. The lungs were somewhat edematous and presented hypostatic congestion posteriorly. A diagnosis of anything else than yellow fever could have been made from the findings at this autopsy; none of the gentlemen present, except the representatives of the Marine Hospital Service, with the evidence placed before them, had any doubt in this regard; Dr. Wasdin insisted that the lesions of the intestines were extravasations and not hypostases; Dr. Geddings was doubtful; Dr. Menocal said nothing.

Our opinion was that the man had died of an enterosepsis of undetermined character, very materially aided by a chronic malarial infection, and that the bacteriological cultures would undoubtedly throw some light on the actual cause of death.

At the risk of lengthening this report to a tiresome extent, we beg to quote from the evidence of some of the gentlemen who saw the patient during his illness and at the post-mortem.

Lieut. A. E. Truby, Assistant Surgeon, U. S. Army, was in charge of the case at the Regimental Hospital; he writes us: "In my opinion he (Patrick Smith) did not have yellow fever. He had a marked amount of albumin in the urine, present from the beginning to the end of his sickness and in about the same proportion. He had been a sufferer from chronic malaria since the campaign in Santiago. During his last spell of sickness he had all the signs and symptoms of typhoid fever. Another case from the same Company died on the hospital ship "Missouri;" the autopsy showed marked typhoid ulcers and evidences of chronic malaria. The symptoms in both cases were the same. In all cases of typhoid fever in men who have been in this hospital, who were still suffering from the chronic malaria contracted in Santiago, we have found albuminuria. Smith had a pulse rate above 100 per minute throughout, and a temperature ranging around 103° F."

Major W. C. Gorgas, Surgeon U. S. Army, writes: "I observed P. Smith, 8th Inf., for about a week before he died. During his life I considered the case suspicious with possibilities in favor of yellow fever. At the autopsy I was convinced that the case was not yellow fever. I saw nothing in any of the organs that resembled yellow fever. There have been quite a number of cases of typhoid fever from this Company, two of them presenting symptoms very much like Smith's. Seven of ten medical men present at the autopsy gave their opinion against yellow fever."

Major Orlando Ducker, Surgeon, U. S. V., writes: "I first saw the case, with Major J. G. Davis, on February 9th, 1899 . . . . it was then the 8th day of the soldier's illness. Temperature 103.5° F.; pulse, 132; respirations, 29. My diagnosis was pernicious malaria with typhoid complications . . . . I saw the case two or three days later; there had been no change; temperature 102.5° F.; pulse, 124; respirations, 28. There was increased tympanites, increased sensitiveness over the bowel, but not so over the duodenum. The yellow tinge of the skin not so deep. A few days thereafter, I was present when you made the autopsy. The skin was less yellow than during illness . . . . I believe had the patient lived a few days longer, there would have been sloughing and perforation of the bowel. The liver was a typical malarial one, there was no yellowish or steel-colored hue. From the history of the case and from examination as well as from autopsy, I can make no other diagnosis than pernicious malaria with typhoid complications and I believe these two were the sole cause of death."

Dr. E. M. Porto, Director of the City Morgue, writes: "Neither from the color of the body, so characteristic in yellow-fever cadavers, nor from the pathological lesions found, could I suspect for a moment that we were dealing with a yellow-fever case; the predominating hyperplasia of liver and spleen indicated a malarial infection." (Translation.)

Dr. S. de Castro, one of the coroners on duty, writes: "I am inclined against the case being yellow fever; it lacked the icteric tint and the hemorrhages or blood infiltrations of stomach and small intestine. The spleen and liver indicated paludism." (Translation.)

Dr. Frederico Cordova also believes the lesions were mainly malarial; he writes: "The color of the skin was not of that distinct yellow which is found in yellow-fever cases, neither did the liver

by its dark color and firm consistency have any similarity with the changes regularly found in that disease; there was also total absence of the hemorrhagic extravasations so typical in yellow fever." (Translation.)

Microscopic examination of the blood made on February 11th, at the Laboratorio Histo-Bacteriologico revealed the presence of malarial parasites and pigmented leucocytes.

We found bacillus typhosus and bacillus icteroides in almost pure cultures from the spleen; bacillus typhosus in pure culture from the kidney; colon bacilli; bacillus icteroides and a non-motile bacillus from the blood of the bacillus only from the blood of the heart. With regard to the presence of bacillus icteroides and the influence it may have exerted in this case, we beg to refer to the "Report on the Cause of Yellow Fever;" it says: "At this visit (February 10th) blood was taken from the ear-tip (on the sixth day of the disease), and when plated gave us numerous colonies of bacillus icteroides" . . . . (page 14). "On the 12th from the blood taken a serum test was made in the dilution of 1 to 20, with a bouillon culture of bacillus icteroides and there was not the slightest influence of either motion or agglutination in three hours. Nor could we get a reaction at any time. This organism we have used very extensively in further work on animals, the resulting necropsies always showing the most characteristic changes in the liver, stomach and intestines."

From the above paragraphs it will be seen that it is claimed that bacillus icteroides was present in large quantities in the blood of the patient on the sixth day, yet on the eight day it fails to be influenced by the serum of this same individual, even after three hours (!) when normal serum would certainly tend to, at least temporarily, immobilize or agglutinate bacillus icteroides. This confirms us in our belief that bacillus icteroides, if present in the blood of Patrick Smith as early as claimed by Wasdin and Geddins, did not exert any influence upon the severer typhoid-malarial symbiosis from which he was suffering. Bacillus icteroides in this instance ran hand-in-hand with the colon bacillus and the other micro-organisms that were isolated.

July 14, 1899.—Benjamin Goodman, civilian, twenty-three (?) years of age, died at 1 P. M.; autopsy at 5 P. M. The man had been suffering from rheumatism for over a month; was treated for malaria up to one week before his death; lately he had dysentery and had been prostrated in his store in Santiago de Cuba, unable to attend to his business (saloon-keeper); he had not had medical attention for three days, when he was found in a dying condition in his room. The city being at the time strictly under quarantine, the body was taken to the Yellow Fever Hospital for the purpose of ascertaining the cause of death.

On autopsy, it presented the following, taken from our notes: "The body is that of a man about forty-five years of age, in rigor mortis, very pale, there is much abdominal fat; hypostatic congestion on the dependent portions. There is no icterus. The mesentery also contains much adipose tissue. The liver is large, of a dark, mottled ashy-brown color, the surface very rough, cirrhotic, with areas of fatty degeneration; cut surfaces granular and moist; the liver of chronic alcoholism. The spleen is of normal size, congested. The stomach is very much dilated, to three times its normal size, the walls are very thick; it contains a large quantity of clear gastric juice and mucus; the mucous membrane is thickened, edematous; the peptic glands are inflamed and enlarged. The duodenum is congested, and contains a small amount of bile. The small intestine is generally inflamed, the seat of an acute enteritis. The colon contains liquid feces; the mucous membrane is swollen and eroded, particularly at the descending portion. Some mesenteric glands were enlarged. The kidney is the seat of a chronic parenchymatous nephritis; the capsule is adherent. The abdominal cavity contains a quantity of serous effusion. The pericardium is tough and contains a small amount of serum. The heart is very much hypertrophied, but soft and in diastole; it contains very little blood. The endocardium is roughened by vegetations; there are calcareous deposits in the auriculoventricular and aortic valves and retraction and insufficiency of the mitral and aortic. The aorta is in an atheromatous condition. The lungs are edematous, on section giving large quantity of serous fluid. The pleuræ are smooth and apparently normal.

Cultures made from the liver of this case developed bacillus icteroides in company with bacillus coli, and a pathogenic variety which was accidently sterilized and could not be studied further.

The three cases above described *were not yellow-fever cases,* and we offer them in refutation to the statement made that bacillus icteroides is not found except in yellow fever.

(To be continued.)

CLINICAL MEMORANDUM.

ATRESIA VAGINÆ; SOLID UTERUS; HEMATOMA OF LEFT OVARY.

BY H. J. GARRIGUES, M.D.,
OF NEW YORK;
GYNECOLOGIST TO ST. MARK'S HOSPITAL.

M. B., American, twenty years of age. Has never menstruated. Every four weeks for the last four years she has had severe pain radiating from the back, around the abdomen to the hypogastric region, lasting a week. Epileptic convulsions, with complete loss of consciousness, foaming at the mouth, and biting the tongue, preceded and often followed the molimina. The patient's intelligence has suffered, as evinced by slowness in answering questions.

Vaginal examination showed a normal vulva

and a vagina two inches deep, without communication with the uterus. Between the vagina and the cervix there was half an inch of soft tissue. Above that was felt a large, round mass in which a hard and soft portion could be distinguished. On account of her epileptic seizures and impaired intelligence, and because such an attempt had been made in vain by another gynecologist, I desisted from trying to make a vaginal connection.

Laparotomy (October 25, 1899) revealed a uterus of about normal size and shape, but a little thick in the antero-posterior diameter. The right ovary was slightly enlarged, and showed a fresh corpus luteum filled with blood. The right tube was normal. The left tube was thickened and bound to a large cyst, which nearly filled the pelvis and was adherent to its walls and to the intestine. I removed the uterus, right tube and ovary in one piece by supravaginal amputation, and then extirpated the cyst. This proved to be the left ovary changed into a hematoma, containing ten ounces of inspissated, chocolate-colored blood.

After the operation the patient suffered much from insomnia and had some pain in the left side of the pelvis, where a small swelling was felt around the stump of the infundibulo-pelvic ligament. She had a slight rise in temperature. On November 11th—seventeen days after the operation—according to the statement of the house-surgeon, three pints of old blood were evacuated through the vagina, at the top of which was felt a small opening. A sound entered through it into a large cavity extending in the direction of the right iliac fossa, where she had some pain. The fluid coming from the opening was old blood mixed with a small amount of pus. I dilated the opening under ether and introduced a double drainage-tube with cross-bar. The patient has been entirely relieved of her molimina, but has had several epileptic seizures during her stay in the hospital and after leaving it.

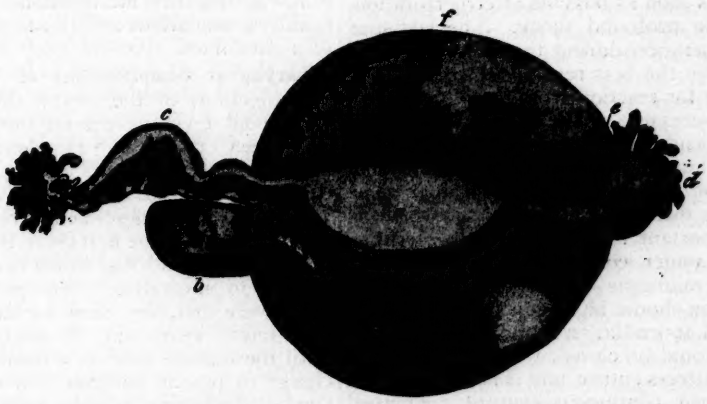
After being emptied, the sac formed by the ovary contracted to the size of a hen's egg, showing what an enormous pressure the bloody contents had been under. The inspection of the inside of the tubes showed a normal mucous membrane. The wall of the left tube was thickened. The uterus had no trace of a canal.

A solid uterus of normal size and shape is very rare, perhaps unique. As a rule this condition is only found when the uterus is represented by a more or less formless mass, and even such rudimentary uteri are extremely rare.

The large hematoma must be looked upon as an internal vicarious menstruation. There being no uterine cavity, the menstrual congestion must have found a weak point in the left ovary, and during four years blood had accumulated in it, transforming it to a bag, which nearly filled the cavity of the pelvis.

716 Lexington avenue.

FIG. 1.



A, uterus; *b*, right ovary with recently ruptured Graafian follicle; *c*, right tube; *d*, left tube; *e*, small cyst; *f*, left ovary converted into a hematoma.

MEDICAL PROGRESS.

Mucinemia in Thyroprivia.—In order to determine the nature of the substance which causes the autointoxication in cases where the thyroid gland is absent (myxedema, cretinism) or where it has been removed by operation, I. Levin (*Med. Record*, Feb. 3, 1900) has made several experiments on rabbits. Believing that the accumulation of mucin in the blood explains, to a great extent, at least, the symptoms of this condition he injected a solution of mucin in one-per-cent. sodium carbonate into eight normal and nine thyroidectomied rabbits. The former remained healthy while only one of the latter survived. It was also shown experimentally that much in-

jected into the blood of a dog uniformly caused a fall of blood pressure.

Surgery of Typhoid Perforations.—W. W. Keen (*Jour. Am. Med. Assoc.*, Jan. 20, 1900) says that operation is the procedure of choice in treating typhoid perforation, except in the few patients whose condition is such that recovery is hopeless. Patients have been operated on three times and yet recovered. Age seems to affect the recovery-rate. Thirteen under fifteen years of age gave nearly 54 per cent. recoveries; 43 from 15 to 25 years of age, 9.3 per cent.; 43, 25 to 35 years of age, 23 per cent., and 20 cases over 35 years, 30 per cent. The female sex has a higher percentage recovery, 42 per cent. in 20 cases, whereas in 106 male cases only 18 per cent. recovered. Perforation in the fourth week has given 33 per cent. recovery, while in the third week only 16 per cent. recover. The best time to operate is as soon as possible after perforation, but not during profound shock. The statistics show that operation during the second twelve hours has given the best results up to this time. While waiting for reaction from shock peritoneal infection is increasing. The avoidance of both these evils depends on advance in two directions, the possible diagnosis of impending perforation, and exploratory operation under cocaine. The use of cocaine instead of a general anesthetic is the most important recent advance in technic. The incision under cocaine is best made in the right linea semilunaris or through the rectus. The perforation should be sought in the ileum, in the cecum and appendix, or in the sigmoid. The perforation should be closed, without paring the edges, by a mattress suture, and if necessary, with a superimposed continuous suture. Thinned areas threatening to perforate should be inverted and sutured. With extensive or adjacent perforations resection and anastomosis may be required. Drainage is usually required, but if the case is not of too long standing and the peritoneum can be well cleansed, it is better to fill the cavity with salt solution and close without drainage. Speed is important, but not at the expense of careful work.

Syphilis from Dental Instruments.—Wm. L. Baum (*Jour. Am. Med. Assoc.*, Jan. 27, 1900) reports six cases of syphilis, in five of which the infection is attributed to wounds from dental instruments, and in the sixth case to an instrument (tonsillitome) in the hands of a physician who never boiled his instruments. He divides syphilitic manifestations in the mouth into three kinds: (1) The initial lesion, or chancre, which may appear on the lips, tongue, tonsils, or fauces; (2) secondary lesions, such as erythematous or papular syphilides, which occur on the velum, the palate and the tongue; (3) tertiary symptoms, such as gumma, which may attack the tonsils, uvula, soft palate, or tongue. The writer gives a description of the different lesions as they appear when found in the mouth. All dentists should have a knowledge of the characteristic appearance of the different syphilitic lesions and should also make a practise of boiling all their instruments.

Use and Abuse of Poultices.—The injudicious employment of the poultice has brought it into such general disrepute that its benefits are now oftentimes lost sight of and its use discarded. S. E. Earp (*N. Y. Med. Jour.*, Feb. 3, 1900) points out that the active principles of the poultice are moisture and heat and hence it matters little what they consist of except so far as their capability of retaining heat is concerned. They must be generous in size, applied hot, and frequently changed. In general it is better to use antiseptic fomentations upon open wounds, but the charcoal poultice is of considerable value as a deodorant in some cases of foul ulcer. The virtues of a poultice are seen in its power (1) to relieve congestion, (2) to promote absorption, favor resolution and hasten suppuration, (3) to diminish tension, (4) to soften incrustations, (5) to stimulate healthy granulations and (6) to perform the office of a deodorant.

Laryngeal Complications of Typhoid.—Peculiar affections of the larynx during the course of typhoid fever have been reported rarely and have been classed as (1) edematous laryngitis, (2) ulcerative laryngitis and (3) laryngeal perichondritis. R. M. Marsden (*Med. Chronicle*, Jan., 1900) has described three cases, one of which belongs to the first class, the other two ending as a perichondritis, which may have been secondary to ulceration. The peculiarities of the cases were that they came on late in the disease, with trivial symptoms of cough and hoarseness until the disease was far advanced, with no discharge of pus or cartilage, but resulting in such marked thickening in and around the vocal cords that the obstruction demanded tracheotomy in each case. The after-treatment of persistent and systematic dilatation was tried with only slight success, the fixation of the cords preventing much improvement in phonation. Where the arytenoids and cords are movable and when a cannula has been introduced, the patient can speak with a fair voice, it is well to persevere with dilatation.

Nephrolithiasis treated with Glycerin.—In the *Medical Chronicle* (January, 1900) A. Hermann reports the use of glycerin in 115 cases of nephrolithiasis with favorable results in 60 per cent. of the patients so treated. In 15 cases concretions were passed with improvement of symptoms while in 25 cases alleviation of symptoms occurred without the passage of any concretions. In order to explain the favorable action of glycerin it is supposed that the effect is physical rather than chemical since no solvent action can be demonstrated. In addition to acting as a lubricant to the urinary passages, it increases the specific gravity and viscosity of the urine and tends to change the position of the concretions in the pelvis of the kidney. The dehydrating power of glycerin is pointed out as a cause for the voiding of quantities of pus and mucus after its administration. The dose is from one to four ounces dissolved in an equal amount

of water and taken between two meals and repeated two or three times in an interval of several days.

Seasickness.—Seasickness is defined by J. Carlisle De Vries (*Indian Med. Record*, Calcutta, Dec. 27, 1899) as "a peculiar functional disturbance of the nervous system, produced by shock resulting from the motion of the ship." He does not consider it a disease of the stomach or alimentary canal, but clearly a functional disease of the central nervous system. The disturbance is divided by him into four stages, *viz.*, depression, exhaustion, reaction, and convalescence. The symptoms begin with a general depression followed by giddiness, nausea, vomiting, and derangements of the bowels and urinary secretion. An abnormal appetite often precedes the stage of depression. As to the treatment, sometimes a deep inspiration simultaneous with the rise of the vessel, followed by expiration as it descends, will ward off seasickness. The writer has not seen any good results from bromide treatment. To lessen the likelihood of an attack the bowels must be opened the day before embarking by calomel, sodium phosphate, or a saline purge, and about twenty grains of sodium bromide taken at about 7 A. M. the day of sailing. One should remain on deck throughout the voyage and partake freely of mineral waters. When one has not taken this preliminary treatment aromatic drinks, lemonade, champagne, and ginger ale prove of great value. A horizontal position should be maintained, and a general plain diet, but no cold food should be taken. Give brandy or wine if stimulation is needed. If confined to stateroom a spinal ice-bag relieves the spinal congestion. In obstinate cases nitrate of amyl given in full doses on the first appearance of epigastric distress is beneficial. When everything else fails, morphine may be given to relieve the retching, but should be given carefully. The writer's experience was gained in 58 transatlantic voyages.

Indigestion and Pulmonary Disease.—Under normal conditions the small intestine is practically free from micro-organisms, while the large intestine is not. After a brief summary of what occurs in normal digestion C. R. Burr (*Bost. Med. and Surg. Jour.*, Feb. 1, 1900) says that it is evident that autointoxication may result, if a departure from the normal occurs in either the intestinal tract or the liver. If indigestion occurs in the intestinal tract the small intestine becomes a veritable culture tube for micro-organisms, and they and their products pass to the liver along with other imperfect products of intestinal and gastric digestion. The result is that the liver-cells are poisoned and do not perform their duty, and as a consequence the general circulation is flooded with poisons, and autointoxication is established. Again, if a person has an insufficient, or functionally weak liver, which often fails in its duties and permits an undue leakage from the portal to the hepatic vein, the same condition of autointoxication will obtain. The blood purifies itself through the skin, lungs, and kidneys, the vehicles being the sweat, the breath and urine. If a case of toxemia is severe enough all these eliminating organs may present acute symptoms. In the lungs, congestion, edema, pneumonia, or bronchitis occurs. The changes in these organs are more chronic in character if the toxemia is less severe, but longer continued. Few organs of the body escape the effects of a general toxemia, but in addition to the three organs mentioned the nervous system and the blood seem to suffer the most. A condition of hemoglobinuria develops in the blood, and organic changes may occur in the nervous system if the toxemia lasts long enough. The medulla and the nerves issuing from it are especially affected by toxalbumins. One of these nerves is the pneumogastric, which is intimately associated with the respiratory center. The writer has already pointed out that there is a paresis of both the phrenic and pneumogastric nerves in pulmonary tuberculosis. In short, repiration may be embarrassed by toxalbumins as well as toxins and ptomaines, no matter how introduced into the system. The action of the diaphragm being interfered with, the capillaries are not emptied and a condition of stasis ensues. Because of this stasis the excrementitious principles carried by the venous blood weaken or paralyze the epithelial cells of the pulmonary alveoli and the endothelial cells of the capillaries, so that they do not repel microbic infection from without. The writer cites a case showing how the lungs can be infected from within. In this case the typhoid bacilli went from an infected intestine, through a paretic liver, into the general circulation, and thence to the lungs. Thus autointoxication arising from simple intestinal indigestion affects the lungs so that they not only cannot repel microbic infection from without or within, but rather invite it.

In croupous pneumonia the coagulation necrosis is limited to the epithelial lining of the alveoli, therefore, it would seem that the epithelial cells were first infected, that is, that the bacteria were inhaled. On the other hand, the coagulation necrosis of pulmonary tuberculosis attacks the capillary network of the lung. The exudate occurs on the outside of the alveoli. The bacteria, therefore, come to the capillaries by way of the general circulation and in many cases without doubt from an infected intestine. With these facts before one Burr thinks some changes might be advantageously made in the traditional treatment of pneumonia and pulmonary tuberculosis. In these diseases great care should be given to the condition of the digestive tract. The intestines should be evacuated and disinfected. Intestinal alteratives are indicated, and no drugs are better than calomel and podophylin. They are best given in small and repeated doses. The inhalation or ingestion of oxygen is of great value. In pneumonia in the first stage, that of hyperemia of the capillaries, the writer uses, as an astringent to contract the capillaries, the soluble phosphate of iron in small and repeated

doses. Tincture of aconite seems to aid it. When hepatization has occurred sodium chloride and pancreatin hasten the digestion of the pneumonic exudate. The writer injects a pint of normal salt solution with a few grains of pancreatin in it, well up into the sigmoid flexure. The sodium chloride exerts an antiseptic influence and the pancreatin may assist in the digestion of the pulmonary exudate. Fresh air and the cure of intestinal indigestion will do much to improve the condition of a patient with pulmonary tuberculosis, and if begun early enough a cure in some cases may result.

Carcinoma of Ascending Colon.—W. McA. Eccles (*Brit. Med. Jour.*, Jan. 13, 1900) records two cases of carcinoma in this comparatively rare site. The first case entered the hospital suffering from acute intestinal obstruction. A median exploratory incision revealed an annular carcinoma of the ascending colon. Through an incision in the linea semilunaris the growth was excised and an artificial anus established in the wound. Death resulted from shock. In the second patient a moveable tumor was felt in the right side. The growth and considerable colon on each side of it were lifted out into the abdomen and prevented from slipping back by sutures placed in the deeper parts of the wound, which was then partially closed, sterile dressings applied, and the patient returned to bed. Fecal circulation continued through the extra-abdominal colon without difficulty. On the eight day, without an anesthetic, the growth was excised and end-to-end anastomosis done, extraperitoneally. The gut healed and gradually retracted into the original wound, and recovery occurred without incident. Success in colectomy depends upon operating before acute obstruction occurs. When there is sufficient mobility, eventration followed by later excision is the safest procedure. If there is acute obstruction, eventration with formation of an artificial anus relieves the immediate symptoms and avoids adding the shock of colectomy to that of the obstruction. The growth can be excised at any later time without an anesthetic. Where the growth is fixed to the parietes, the best procedure is to carry the fecal circulation around it by an ileocolic anastomosis.

Gastrectomy.—G. C. MacDonald (*Phila. Med. Jour.*, Feb. 3, 1900) says that no operation requires more careful selection of cases, and more careful preparation for the strain and shock of operation. The patient must be neither very old, thin, nor cachectic. The heart especially must be in good condition. Patients who have used alcohol even to slight excess, and those who have been subjected to constant nervous strain are not suitable. Renal or hepatic disease contraindicates the operation. The stomach should be made as nearly aseptic as possible. The operating-room should not be cooler than 80° F., the patient should be swathed in cotton and placed on hot-water bags to prevent loss of heat. At least four trained assistants are necessary to the rapid, smooth performance of the operation. The stomach is exposed through a long median incision, its attachments divided from cardia to pylorus, and it is then resected. The esophagus and duodenum are then joined by a Murphy button, or if the cut ends cannot be easily approximated, the duodenum is closed, and the esophagus anastomosed with a convenient portion of jejunum. The wound is then closed and the patient put to bed, which must be well warmed. Since both vagi are cut and the solar plexus much handled, marked nervous disturbances occur; there is considerable shock, and the heart gallops because of the uncontrolled action of the sympathetic. Besides the general stimulation for shock, one must steady the heart's action by digitalis as otherwise it stops work inside of three days from sheer exhaustion. After twenty-four hours liquids may be given by mouth, and as soon as the button is passed, solid food may be given. The causes of failure have been: Poor general condition, the patient dying either on the table or soon after operation; the heart has galloped to exhaustion in spite of treatment and leakage and peritonitis from imperfect coaptation of esophagus and duodenum.

Treatment of Neurasthenia.—The close contact of physician with patient is of extreme importance in the cure of neurasthenia according to O. Dornblüth (*Münch. med. Woch.*, Jan. 16, 1900). A thorough physical examination will awaken confidence and prevent errors of diagnosis and the patient should be informed of the true character of his disorder. The most important rules to keep the patient in bed and absolutely at rest for from one to six weeks, depending on the severity of the case. Where this is impossible, the recumbent posture should be assumed during all leisure moments. Strict dieting is not necessary; even coffee and tea may be allowed, but alcohol is to be strictly interdicted. Even when nervous dyspepsia is present the regular plan of feeding five times daily at intervals of two and a half to three hours is admissible, but when great irritability of the stomach dominates the clinical picture, the diet should be similar to that for gastric ulcer, or solid and liquid food alternately every one and a half hours may be given. To quiet the nervous system the best results were obtained by applying cloths wrung out in water at 59° F. to the abdomen and covering these with flannel, or by giving a bath at 81-88° F. with the tub but half filled, for four minutes. Massage is not to be resorted to but general faradization with weak currents is excellent. As for drugs, a depreciated condition of the blood demands iron, preferably in organic form, while for the severer manifestations of the disease codeine acts almost as a specific. In selecting sanatoria, especial care is necessary to choose such which really meet the indications.

Diagnosis of Gastric Ulcer.—F. H. Murdoch (*Phila. Med. Jour.*, Feb. 3, 1900) says that the most important point in the diagnosis of gastric ulcer is to think of ulcer. He reviews the symp-

toms of the disease and cites some cases. Hemorrhage and the peculiar epigastric pain are the most important. He lays special stress on the importance of the circumscribed tender spots found in front over the stomach and the corresponding tender spot in the back to the left of the twelfth dorsal vertebra. He says that if, in a patient with dyspeptic symptoms, a small circumscribed spot of tenderness in the epigastrium is found it is justifiable to make a diagnosis of gastric ulcer, whether there has been pain or hemorrhage or not. This tender spot, however, must be constant, not present one day and absent the next. This tenderness lasts for months sometimes and it is not safe to give solid food while it is present. General tenderness over the stomach is uncommon.

Orthoform promptly relieves the pain of gastric ulcer and because of this is a valuable aid in making a diagnosis. The writer concludes that in patients with dyspeptic symptoms, gastric ulcer may be diagnosticated positively in one of three ways: (1) By the occurrence of hemorrhage from the stomach; (2) by the presence of severe pain relieved by orthoform; (3) by discovering a small, constant, circumscribed spot of tenderness in the epigastrium with or without a corresponding tender spot to the left of one of the lower dorsal vertebræ.

Acute Serous Synovitis.—P. Hoffmann (*N. Y. Med. Jour.*, Jan. 27, 1900) speaks of the compression treatment of acute serous synovitis. The principle is to fill all depressions about the joint with cotton and then obtain firm, even pressure by means of adhesive plaster strips, which should extend several inches in each direction from the joint. The absorption of the effusion is very rapidly accomplished and at the end of the first day the dressing must be renewed on this account. Flexion, which is usually present where the effusion is considerable, rapidly disappears. The other advantages of the treatment consist in the light weight of the dressing, the immediate relief from pain which it affords, and, most important, it permits the joint-functions, motion and weight-bearing, without injury. As a rule the patients may use the limb in any way not causing pain. The time required for complete recovery varies from one to three weeks. The firm, even pressure of the plaster diminishes the lumen of the engorged vessels, thus relieving congestion, relieves the tension on the overstretched ligaments and capsule, thus relieving pain, and hastening the process of absorption.

Plague at Singapore.—An interesting light has been thrown on the vagaries of the plague as regards its transmission by sea, by a detailed report of the cases that have occurred at Singapore by M. F. Simon (*Lancet*, Jan. 20, 1900). The geographical position of Singapore, between India and the West, on one side, and China and the far East on the other, has given the place the position which it holds as a very large center of trade, and renders it especially exposed to danger of plague when that disease is prevalent in the countries from which so much trade and so many immigrants come, and yet very few cases of plague have occurred, none seem to have spread the infection, and many "doubtful cases" seem to have recovered before the disease reached its height. We are led to conclude from the care with which the report has been prepared, and the logical and careful treatment of all doubtful problems, that the plague is not readily transmissible by sea to countries near the equator. It seems to be true in many cases that when an infected patient leaves the country in which the plague is endemic and travels towards the central tropical zone the disease has a tendency to abort. The bacilli seem to disappear, or become modified or inert, leaving the patient to gradually lose the fever and to recover from the glandular affection. The facts bear out the statement that the plague does not spread on shipboard when the patients are removed from endemic environment; and we are encouraged to believe that the danger of conveyance of infection by cargo and baggage for any distance by sea is practically nil.

Etiology of Rectal Stricture.—Acquired strictures of the rectum are much more common in women than in men. Reuben Peterson (*Jour. Am. Med. Assoc.*, Feb. 3, 1900) discusses the etiology of rectal strictures in women under two heads: (1) Those in whom the caliber of the rectum is diminished by pressure from without, organic changes in the walls being secondary; (2) those in whom the rectal walls are primarily affected, the organic changes causing a diminution of the lumen of the rectum. In the cases of the first division the pressure from without is due to a tumor in the pelvic basin, or it may be to a pelvic abscess, or more often to suppurative disease of the appendages. A case is cited in detail illustrating a stricture due to pressure from the latter cause. Under 2 are those cases in which the stricture is due to an inflammatory process in the walls of the rectum itself. An inflammatory process with an increase of connective tissue may lead to contraction and stricture of the rectum. The causes of this inflammatory process, and, therefore, of the stricture, the writer says, may be trauma, dysentery, gonorrhea, tuberculosis, or syphilis. Any trauma to the mucous membrane of the rectum, causing loss of substance and ulceration can result in a stricture. Unskilful operations on the rectum or any resection of the rectum is apt to be followed by stricture. It has been thought that in dysentery, marked by ulcerative processes in the rectum, a stricture might result from contraction following the invasion of the submucosa and muscularis by the ulcerative process. This is probably a very uncommon sequence of dysentery, although a number of cases have been reported. Gonorrhea of the rectum occurs, but while it may cause rectal stricture, it is still far from being proved. Tubercular ulceration and stricture of the rectum have been observed, but more especially as following dysen-

teric ulceration. A careful examination as to the existence of tuberculosis as a causative factor should be made in each case. There is no doubt that syphilis exists in a large proportion of those who have rectal stricture, but whether it is an active or frequent cause of stricture, and if so, in what manner it brings about the condition of rectal stenosis, are questions about which there is a great diversity of opinion. Some observers think that syphilitic strictures follow the breaking down of gummatous deposits in the rectal wall. Others, among whom the writer seems to be, think that the condition is due to the inflammation caused by chancres but not to the chancres themselves. Peterson cites a case in which, although there was no history nor evidences of syphilis, the microscopical findings in nine inches of the rectum removed by operation would lead one to think that such was the cause. Gross examination of the segment removed showed a normal mucosa, which proved that the disease began in and was confined to the deeper layers and hence could not have been caused by chancroid, gonorrhea, or trauma. On the whole the etiology of rectal stricture does not seem to be well established in the greater number of cases. Numerous citations from different investigators appear throughout this paper, and a full bibliography on the subject is given.

Uterine Fibroid.—F. H. Champneys (*Lancet*, Jan. 20, 1900), basing his statements chiefly on the records of five London hospitals, says that the mortality after operation for fibroids is 17 per cent., while the mortality of fibroids apart from operation is 3 in over 2,000,000, or a little over .0001 per cent. In the natural course of events, therefore, fibroid tumors do not cause death, and, therefore, it is not necessary to remove them. Whether or not their removal is desirable depends on the merits of each case. Severe recurrent bleedings may render surgical relief necessary. Severe pain also calls for relief. Dangerous pressure symptoms are usually those causing retention of urine, and call for immediate interference. Rapid growth is often an indication for interference especially when accompanied by bleeding. A cystic fibroid grows persistently and should be removed. Malignant degeneration, although often talked of, is very rarely seen. There is a tendency at present to remove fibroids more freely. Operation is unjustifiable unless the fibroid is dangerous to life, or destructive of the patient's comfort and happiness, in which case the dangers of operation should be explained and the patient allowed to choose.

Huntington's Chorea.—Huyghe (*Le Nord Médical*, Jan. 15, 1900) describes minutely a case of this rare nervous disease affecting a man of thirty-nine years. The maternal grandfather, the mother, and an elder brother were affected in the same way at about the same age, while some sisters of younger age were still free from the disease. Beginning with a staggering, somewhat spastic gait, the legs, followed successively by the arms, head, and trunk, became subject to irregular, involuntary incoördinated, and purposeless movements. These became more energetic when attention was directed toward the patient or when voluntary motion was attempted; yet no matter how violent, they were never followed by rigidity or fatigue. They could be suspended momentarily by the will, and in sleep ceased entirely, yet under excitement were very marked. Speech was explosive, somewhat scanning, and there was slight tremor of the face. Sensation was normal, the patellar reflex present, no ankle-clonus, but there was abolition of the corneal and laryngeal reflexes. The intelligence was poorly developed, thought slow, and he had a tendency to a fixed idea, yet was cheerful and sociable. Later on he developed a condition of dementia.

Local Anesthesia.—A. E. Barker (*Lancet*, Jan. 20, 1900) reports fifty-three cases, including radical cure of hernia, resection of intestine, gastro-enterostomy, goiter, wiring of patella, etc., in which local anesthesia by means of 1 to 1000 eucaine B. in normal salt solution was used. For some patients as much as six ounces of this solution were used, with no ill effect. There is no interference with primary union. Children and timid adults are not adapted to its use, for they are frightened by the surgical surroundings. Acutely inflamed areas cannot be rendered entirely anesthetic. Dragging the mesentery causes a sense of pressure or griping.

Syphilis of the Nervous System.—Syphilis is one of the most frequent infectious causes of organic nervous disease. Wm. M. Leszynsky (*Jour. Am. Med Assoc.*, Jan. 27, 1900) says that every morbid condition of the nervous system which may develop in a person is not necessarily due, however, to a syphilis acquired at some more or less remote period. A favorable prognosis does not necessarily follow the discovery that a lesion of the nervous system is of a luetic nature. It has been demonstrated by clinical experience that patients who have undergone a thorough and systematic antisyphilitic treatment in the early stages of the disease are not insured thereby against subsequent syphilitic disease of the nervous system. Thus it seems that there is no remedy which will protect the nervous system against syphilis. When syphilis attacks the nervous system it affects it in several ways. (1) It may produce an endarteritis in the intracranial or spinal arteries, which gradually leads to thrombosis and occlusion of vessels. (2) It may give rise to a gumma or a local or diffuse gummatous exudate, which may gradually press upon, and finally destroy the nerve-cells or conducting fibers. (3) The cell substance may undergo degeneration because of a gradual interference with its nutrition. The first two forms, known as "inflammatory" or "exudative," often occur within the first two to three years, and may occur within a few months, after infection. They are more or less acute. The third form is called "degenerative" and is chronic. The forms of brain syphilis most dan-

gerous to life are: (1) That which attacks the cerebral arteries, producing obliterative endarteritis, and (2) basal-meningitis and meningo-encephalitis extending to the posterior fossa. The symptoms, which result from the destruction of nerve-cells, when they have persisted for months or years in spite of treatment, are those which are not amenable to further treatment of any kind. When a cerebral artery—it is most frequently the middle cerebral or its branches—becomes the seat of thrombosis, the nutrition of an area of the brain is interfered with, and there is a corresponding impairment of its physiologic function. The amount of disturbance depends upon the size of the vessel involved and of the area supplied by it, and upon whether the occlusion is partial or complete. The cutting off of the blood supply of an area causes a necrotic softening which no antisyphilitic treatment can remedy. Cerebral hemorrhage causing destruction in the internal capsule may be due to the rupture of a syphilitic artery, but antisyphilitic remedies cannot repair the damage. In such conditions it is not only useless, but harmful, to persist in giving mercury or potassium iodide. It is in recent luetic inflammations that antisyphilitic remedies are of value. The rapidity of relief depends on the virulence of the disease, the character and duration of the symptoms, and upon the susceptibility of the patient to mercury and iodine.

Phthisis and Obesity.—Under this title B. Martin (*Le Nord Médical*, Jan. 15, 1900) directs attention to the victims of tuberculosis whose pulmonary lesions are grave and extensive and who yet remain stout and in good condition. Many of these owe their general health to the influence which an arthritic constitution exercises on the progress of pulmonary tuberculosis. Some have presented in youth the stigmata of scrofula; and there is no doubt that the scrofulous diathesis plays some part in the production of these types. Others owe their robust condition to good digestion, rest, fresh air and methodical and intelligent superalimentation. In all, even with cavities, the prognosis is not unfavorable for a prolonged course to their disease, and comparative freedom from disagreeable symptoms. They retain a stout, hearty appearance, eat and sleep well, have neither diarrhea, fever, nor night-sweats, are able to attend to business, and yet have the most extensive lesions in their lungs.

Tensile Strength of Sciatic.—Since the operation of stretching the sciatic nerve has been so frequently performed to relieve intractable sciatica, it is important and interesting to know how much strain upon the nerve is safe and advisable. W. E. Lower (*N. Y. Med. Jour.*, Feb. 3, 1900) has tested the strength of the sciatic nerves of nine subjects shortly after death in a manner similar to that used in the operation of nerve-stretching. In one case the nerve gave way when only one hundred pounds had been used. The average weight required was one hundred and forty pounds. In most of the cases the nerve did not break, but its connections with the cord and membranes were detached.

Home Treatment of Consumption.—In probably 95 per cent. of all cases of consumption a change of climate, or life in a sanatorium, is impossible and they are confined to their homes for treatment. Wm. Osler (*Maryland Med. Jour.*, Jan., 1900) says that the arrest, or cure, of tuberculosis is a question of nutrition entirely, and that the essential factor is to improve the resisting forces of the body so that the disease cannot make further progress, or is eradicated. Fresh air and good food are the most important means by which the nutrition may be increased. While the quality of the air in our cities may not be of the best, it is a great deal better than the atmosphere of the ill-ventilated and overheated rooms in which a great number of phthisical cases live. The writer gives the following directions to his patients: In winter the patient is to be out-of-doors during all of the hours of sunshine except the first two in the morning and the last one at night. If out-of-door life is impossible, the patient should be in a room with southern exposure, with windows wide open, and the bed in the sunshine. If there is a balcony with southern exposure, the patient, well wrapped up, should sit or recline there on a comfortable lounge all day long, except when the weather is very rainy or stormy. The bedroom should be well ventilated at night and the patient gradually accustomed to have the window open. This contiuous open-air life, at rest, has a wonderful influence over the fever of consumption. Often for a month, or perhaps two, or even three months, the temperature will be normal. Those patients do best who are able to take plenty of food. Lack of appetite and weak digestion are due in great part to the fever, therefore, as the temperature falls, the appetite often increases. Each patient should eat as much as he can, even to overfeeding, or stuffing, if possible. Besides the ordinary meals, Osler urges his patients to take raw eggs, beginning with one three times a day, and increasing one a week until they take perhaps 20 to 24 daily. This he finds the most satisfactory and simple diet for the hyperalimentation. The egg, broken into a cup and seasoned with salt and pepper, can be swallowed without breaking the yolk. The main diet should consist of milk, cream, butter, eggs, meat and oysters. Osler divides the medicinal treatment into (1) the use of stomachics, bitter tonics and digestives; (2) cod-liver oil, hypophosphites and creosote for general nutrition, and (3) remedies for cough, pain, night sweats, etc.

Progressive Muscular Atrophy.—Placzek reports an anomalous case of this disease (*Virchow's Archiv.*, 158, p. 105), which, while from a clinical point of view was a most typical case of progressive muscular atrophy and showed the typical alterations in the ganglion cells of the anterior horns of the spinal cord, yet also showed the classical objective changes found in tabes dorsalis. These findings existed without the patient

having shown any of the symptoms of this disease. He had been a type specimen for class demonstration for some time and notwithstanding the most minute examinations had never evidenced any changes in the pupils, nor variations in the sensations of taste, pain, place and had never had any pain nor interference with the functions of the bladder nor of the large intestine. Loss of knee-jerk had developed late in the disease.

Night-Air of New England in Consumption.—C. S. Millet (*Maryland Med. Jour.*, Jan., 1900) tells of the treatment he has instituted and the results obtained in some cases of phthisis which he cites. The treatment consisted in the patient sleeping out-of-doors, except on those nights when it was very rainy. The cot was placed on the roof of a veranda, or on a platform built against the house. The patients used as much bedclothing as was necessary to keep them comfortable. The first case was a young man with a remarkable family history of phthisis. He had incipient phthisis and had lost twenty pounds in weight. For five months he slept out-of-doors every night. At the end of one month his temperature was normal and his cough and dyspnea nearly gone. At the end of five months it was found that he had gained twenty-two pounds. The only medicine he took was some tincture of nux vomica. He worked all during the five months in a factory, and is now perfectly well. A second case was of a man sixty-four years old with distinct physical signs. He has slept out several months, with an improvement in the physical signs and a gain of eleven pounds as a result so far. A third case was of a boy infected with tuberculosis from his father's cow, whose cream he had taken to excess for some time. When the cow was killed the source of the infection was learned. This boy's lungs were so extensively involved that a permanent arrest of the condition is not expected, but after sleeping out-of-doors for six months he gained nineteen and a half pounds and feels so well that he has to be restrained by putting him to bed whenever his temperature goes above 99.5° F. Case four is of a man who has had a pulmonary hemorrhage, and lost a good deal in weight. He had a cough, much weakness, and a small solidified area, so that he stopped work. He had been shut up in-doors eighteen out of the twenty-four hour for a long time. He has slept out-of-doors, gained twelve pounds, and the physical signs have nearly disappeared. Case five is of a young man with marked physical signs. He has commenced to gain in weight, although he has not been sleeping out-of-doors very long. In all these cases the more air they got, the more appetite and the less cough they had. Not a dose of cough medicine was given to any of these cases. Two neurasthenics, one of whom had been condemned to die of tuberculosis, tried sleeping out-of-doors and have been decidedly benefited. The diet was not restricted, but the patients were recommended to take plenty of milk, eggs, and vegetables. The patients were required to take a cold sponge bath each morning and another at night, at about 90° F. Millet thinks a patient should rest in bed enough during the day to keep his temperature below 99.5° F.

Formulæ for Bronchitis.—Landesmann states the following formulæ to be in use in Neusser's clinic in Vienna:

1. Expectorant mixture:

℞ Rad. senegæ .....3iiss v
Ac. hydrochlorici dil.....gtt. v
Syr. senegæ .....3iv.
M. Sig. One tablespoonful every three hours.

2. In case of constant, irritating cough:

℞ Peronini .....gr. iii
Aq. laurocerasi .....℥ss.
M. Sig. Ten drops three times a day.

3. In case of dry cough:

℞ Tinct. opii .....gtt. x
Decoct. altheæ .....℥iiss
Syr. rubi id. .....3iiss.
M. Sig. One teablespoonful every two hours, or:

℞ Apomorphin. hydrochlor. .....gr. ½
Morphin. hydrochlor. .....gr. ⅓
Ac. hydrochlorici dil.....gtt. v
Syr. cort. aurant. .....℥ss
M. Sig. To be taken in one day.

Care of the Mouth in a Healthy Child.—For the first six weeks the infant's mouth should be washed before nursing and also after nursing, unless asleep, with a soft, small square of linen dipped in water. No square should be used more than twice, or at another nursing. By the time the child is three or four months old it will suffice to wash the mouth twice a day. During dentition, however, it should frequently be washed out with cold water. As long as the child subsists on milk and broths the teeth need cleansing with a bit of wet linen only; when solid food is taken a soft, fine tooth-brush should be used. The following makes a suitable powder:

℞ Pulv. oss. Sepiæ 3v
Magnesii carb. 3v
Pulv. rad. iridis flor.....3ss
Ol. menth. piper. .....gtt. iii.
M. Sig. Tooth-powder. Rinse the mouth well after using.—*v. Widerhofer.*

For Sciatica.—Prescribe six to eight capsules daily, each containing one and one-half grains of ichthyol, and in addition inunctions with:

℞ Ichthyol 3v
Chloroform .....℥i
Bals. tranquillans .....℥i.
M. Sig. External use.—*J. Crocq.*

For Aphthous Patches in Infants.—

℞ Sod. boratis 3i
Tinct. benzoin. 3i
Syr. rubi. id.....3x.
M. Sig. External use.

The patches should be touched five or six times a day with a bit of cotton saturated with the above.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

COMMUNICATIONS in the form of Scientific Articles, Clinical Memoranda, Correspondence, or News Items of interest to the profession are invited from all parts of the world. Reprints to the number of 250 of original articles contributed exclusively to the MEDICAL NEWS will be furnished without charge if the request therefor accompanies the manuscript. When necessary to elucidate the text illustrations will be engraved from drawings or photographs furnished by the author. Manuscript should be typewritten.

J. RIDDLE GOFFE, Ph.M., M.D., Editor,
No. 111 FIFTH AVENUE, NEW YORK.

Subscription Price, including postage in U. S. and Canada.

PER ANNUM IN ADVANCE	$4.00
SINGLE COPIES	.10
WITH THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, PER ANNUM	7.50

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in *registered* letters.

LEA BROTHERS & CO.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK,
AND NOS. 706, 708, & 710 SANSOM ST., PHILADELPHIA.

SATURDAY, FEBRUARY 10, 1900.

DIET IN CONSUMPTION.

A FEW years ago French clinicians took up the subject of feeding, overfeeding in fact, and claimed for it practically specific therapeutic properties in the treatment of consumption. Professor Fuster of Montpellier obtained excellent results in a number of cases by the addition to the ordinary diet of raw meat and alcohol. By the administration of from 100 to 300 grams (3 to 10 ounces) of raw meat-pulp and 100 grams (3 ounces) of cognac, he obtained such rapid and marked improvement in his first series of cases that for a time it seemed as though he had found a specific for tuberculosis.

Like so many other vaunted specifics, however, it proved a disappointment. It was demonstrated, however, that in certain cases of incipient tuberculosis, especially where patients have always been free meat-eaters and their appetite and consequently their consumption of meat have decreased, this method of treatment constitutes one of the best therapeutic measures at our command.

Later Professors Debove and Dujardin Beaumetz at the University of Paris recommended forced feeding. In cases in which the patient showed repugnance to taking much more than the usual quantities of food they suggested the use of the stomach-tube, so as not to excite the patient's aversion to the food during its deglutition, as this would be apt to interfere with its digestion. Debove considered that after a period of preliminary training as much as 500 grams (over 15 ounces) of specially prepared meat-powder might be given. This is the equivalent of about four pounds of fresh meat. Besides this, however, the gave from 200 to 400 grams (6 to 12 ounces) of powdered beans or lentils, from 8 to 10 eggs, and advised very free consumption of milk. His patients increased very rapidly in weight under this regimen, as much as twenty to forty pounds in three months, and the ordinary symptoms of tuberculosis of the lungs, the fever, the night-sweats, the coughing, and the expectoration, all improved. A far smaller number of patients than might be imagined were found, at least in hospital practise, to be incapable of assimilating these heroic quantities. Relapses, however, were rather frequent, showing that the gain in strength was not a stable one. It became evident that a more gradual putting on of weight was more effectual in preventing further progress of the disease and avoidance of relapses.

The work thus overdone has not, however, been without is effect on the modern therapeusis of consumption. It has taught a lesson that has been cherished, especially at the sanatoria. Liberal diet to tempt the appetite, tonics to whet it, and the physician's prescription as to definite amounts to be taken, constitute one of the most important legs of the therapeutic tripod, fresh air, abundant food and regular life, upon which the modern successful treatment of consumption in sanatoria rests.

SARANAC HOME FOR ADVANCED CONSUMPTIVES.

AN appeal to the charity of the generous that deserves a most hearty and ready response is made in the fifteenth annual report of the Adirondack Cottage Sanitarium. Dr. Trudeau asks for the establishment in Saranac Lake village of a reception-hospital for cases of consumption that are too far advanced for admission to the Sanitarium. He says:

"During the entire year, but especially during the summer months, scores of invalids in the last stages of the disease come to Saranac Lake village, either with scanty purses or wholly without

funds, full of the new hope which the prospect of admission to the institution has brought them only to meet the bitter disappointment of finding they cannot be taken in because their cases are beyond the reach of treatment. Too sick often to care for themselves, without money and without friends, their position is most pitiable and they seek here, often in vain, a place to await the inevitable end. A separate hospital building that would afford a shelter to these stranded and helpless human beings would, indeed, be a fitting complement to the work of restoration attempted at the Sanitarium."

A noble opportunity is thus presented for most helpful beneficence. The great good that has been accomplished at Saranac in the past, under the unselfish care and constant self-sacrificing devotion of its modest director, is too well known to need to be dwelt on here. To Dr. Trudeau, above all others, is due the present practical movement for the care of the tuberculous in this country which promises to be of far-reaching effect in our struggle with the great white plague. The present report of the Saranac Lake Sanitarium furnishes additional proof of the great work that he is doing. The concluding words of the President's report to the Board of Directors are worthy of note:

"Two hundred and fifty-four patients have been treated. To two hundred and eight of these the institution has furnished the best possible means of restoration to health at less than one-half the cost these could be procured for elsewhere, and to forty-six entirely free of cost to them."

We sincerely hope, then, that Dr. Trudeau's appeal will meet with the immediate generous response it deserves, and that this new feature of his work may soon be ready for the poor sufferers, whose needs are so great. We know of no charity where funds could be spent with more actual benefit to suffering humanity than in the way suggested. Physicians who are consulted by the generously charitable for direction in the disposition of funds should bear in mind the modest appeal of the pioneer sanitarium at Saranac.

FRESH AIR AND THE DEATH-RATE OF THE PLAGUE.

IN view of the possibility that the plague may become a well-known disease in Europe and America before many years have passed, some figures published by Weir, one of the officers of the Sanitary Service of Bombay, are full of interest. He hit upon the idea that the mortality was greater among patients who live on the ground floor of houses than among those who live in higher stories. By tabulating cases according to the story in which they occurred he found a striking decrease in the death-rate with each additional flight of stairs. Thus the mortality among patients living on the ground floor was 84.7 per cent. For each successive story the mortality was as follows: First, 75.5 per cent.; second, 67.3 per cent.; third, 59.7 per cent.; fourth, 58.1 per cent.; fifth, 45.4 per cent. Buildings in Bombay are not so constructed as to permit an investigator to extend his observations above the fifth story. Proceeding, however, along the same line, the mortality in the tenth story would be 22.7 per cent.; in the fifteenth, 11.4 per cent., and in the twentieth story, 5.7 per cent. Who will dare to guess the amount of rent which the owner of the tallest building will receive for his top story, if the plague reaches Chicago!

In the densest portion of Bombay the houses are built on narrow streets and are surrounded by broad, low verandas, which permit scarcely any air or light to penetrate into the lower stories of the central part of buildings. This decreased mortality for the residents of upper stories held good not only in such houses, but also in better built ones. Moreover, people living in separate houses, as in the country districts, recover from the plague in a far greater proportion than those living in close quarters. The Indian government is considering the advisability of tearing down and rebuilding the houses in the worst district of Bombay, so that the tenants shall have a reasonable amount of light and air. If the new buildings are to be put on a paying basis, however, the rent necessarily charged will be entirely beyond the reach of the inhabitants of the present structures which they aim to replace.

In this connection may also be mentioned the plan proposed by Pierre Apery of Constantinople to rid an infected ship of rats. It is a well-known fact that rats are capable of spreading the plague; hence to fumigate a ship and leave a horde of rats in its hold is a comparatively useless procedure. Apery's plan is to tow the ship a mile or more from land. Cheese and fragments of food are scattered in the most accessible portion of the hold in order to bring together all the rats. A generator of carbonic acid gas is then set to work to form enough gas to displace the air in the lower portion of the ship. Owing to the weight of this gas it sinks slowly to the bottom and gradually displaces all the air. As

a mixture of one part carbonic acid gas and two parts of air is sufficient to suffocate an animal it will not be long before the diffusion of the gas will kill all the rats. As the gas has no unpleasant odor or taste animals are not frightened by it and even if a few should jump overboard the distance from land is so great that they will be drowned. The upper level of the gas may be determined by lowering a lighted candle into the hold. When the gas is reached the candle will be extinguished. When the rats have been killed the carbonic acid gas may be pumped out of the ship. The bodies of the vermin are then collected, disinfected, and destroyed. This method of procedure is simple, easily carried out, and inexpensive in comparison with the effects it accomplishes.

ECHOES AND NEWS.

NEW YORK.

State Medical Society.—Dr. A. M. Phelps of New York, at the recent meeting held in Albany, was elected president of the Society for the ensuing year.

Measles at Fort Slocum.—Measles have broken out at Fort Slocum, on David's Island, where fifteen hundred recruits and nearly a hundred United States Army officers are awaiting transportation to the Philippine Islands. There are now ten cases.

A Correction.—By some inexplicable inadvertence Dr. H. C. Coe in our last issue was designated as Professor of Gynecology at the Cornell University Medical School. This is an error. Dr. Coe is Professor of Gynecology at the Bellevue Hospital and University Medical School. In the last paragraph of his article the word "fortunate" should read "unfortunate."

Shake-up of Pension Surgeons.—The Boards of Pension Surgeons of this city have been reorganized under orders from Washington. The number of boards have been reduced from six to four and fifteen of the former surgeons have been dropped from the Government employ. The three members of the old boards who were retained are Drs. D. D. Stevens, R. T. Bangs and Frank H. Zitz.

Contagious Diseases.—For the week ending February 3, 1900, there were reported: Measles, 817 cases and 21 deaths; diphtheria, 322 cases and 55 deaths; laryngeal diphtheria (croup), 13 cases and 8 deaths; scarlet fever, 220 cases and 21 deaths; smallpox, 2 cases; chicken-pox, 43 cases; tuberculosis, 237 cases and 144 deaths; typhoid fever, 20 cases and 13 deaths; cerebro-spinal meningitis, 3 deaths.

Skin and Cancer Hospital.—Dr. Bulkley will close his course of lectures on diseases of the skin, at this institution, with three lectures on syphilis, February 14th, 21st and 28th, at 4.15 o'clock. The lectures will cover the entire subject and will be freely illustrated by cases, models and plates. These lectures, as in the series just closed, will be free to members of the profession on presentation of their professional cards.

Officers of Obstetric Section.—At the January meeting of the Section on Obstetrics and Gynecology of the Academy of Medicine, J. Riddle Goffe was elected chairman and George Gray Ward, Jr., No. 230 West 59th street, secretary. Dr. Samuel Hall, one of the three surviving founders of the Academy was present and gave some interesting reminiscences of practise in New York fifty years ago.

Sales of Antitoxin—A bill has been introduced in the Legislature in reference to the sale of lymph and antitoxin in Greater New York, which provides that in case the amount of lymph or virus shall exceed the amount required in the proper performance of its duties, the Board of Health may cause such excess to be sold at public auction, but the aggregate net amount of such sales shall not in any one year exceed $5000. It has been the practise of the Board to sell its excess of antitoxin at private sale.

Arrest of Fifteen Midwives.—Dr. Feeney of the Board of Health applied, on February 4th, for warrants for fifteen midwives who, he declared, were conducting lying-in institutions on the East side without permits from the Health Department. Dr. Feeney declared that the number of midwives had increased recently and that they were conducting a business prohibited by the Sanitary Code. They failed generally to make any report to the Board of Health of the infants born on their premises. A police sergeant and a dozen policemen were on hand and made affidavits on which the complaints were based.

The Removal of Dr. Backus.—Governor Roosevelt has failed to reappoint Dr. Truman J. Backus manager of the Long Island State Hospital. This failure is in effect a removal of Dr Backus. The latter has filled his position most capably. A few weeks ago the Governor distinctly gave those interested to understand that he recognized the necessity of reappointing Dr. Backus and should send in his nomination shortly after New Year's. Instead, he has sent in the name of another man. The real explanation may lie in the fact that, as the chief member of the Board of the Hospital, Dr. Backus some time ago, for the very best reasons, it is said, compelled the resignation of the hospital's superintendent, who was the son-in-law of Senator Raines.

Mount Sinai Hospital.—The plans for the new buildings of the Mount Sinai Hospital are being completed rapidly by Architect Arnold W. Brunner. Most of the money has been raised, and the remainder, it is expected, will be obtained without difficulty. The excavations will begin early in the summer. The total cost will be considerably more than $1,000,000.

The new hospital will occupy a group of buildings of marble and light brick, with marble trimmings, covering the block bounded by Fifth and Madison avenues and One Hundredth and One Hundred and First streets. All the buildings will be connected by covered corridors. The roofs of the ward buildings will be used as roof gardens, and will have sun-rooms in the central portion for use in the winter. All will be strictly fire-proof and finished as far as possible in the interior with tile and marble. The advance in the price of building material will necessitate an additional expense of $50,000 in construction and there is some talk of delaying the erection of the building on this account.

Mortality in New York State.—The State Board of Health at Albany reported on February 2nd that the number of deaths from all causes for 1899 was 121,820. This is 850 more than in 1898 and 4740 more than in 1897, which was a year of unusually low mortality. The death-rate per 1000 is 17.3, which is the average death-rate for the past ten years. The infant mortality was less than the average by nearly 5000 and is 1800 less than that of last year, 29 per cent. of the deaths occurring under five years of age against the average of 35. A point to be noted in connection with the antitoxin treatment is that compared with the average of ten years the deaths from diphtheria are but little more than half as many, although the number is 175 greater than in 1898. Diarrheal diseases caused 2000 fewer deaths than the average. Whooping-cough, measles, scarlet fever and malarial diseases all caused fewer deaths than the average. Smallpox caused 21 deaths, all save three of which occurred in New York City. The outbreak in the western part of the State, beginning in May, 1898, continued till midsummer of 1899, reaching forty-five localities in fourteen counties and attacking 320 individuals and produced but one death. At the end of the year the State is believed to be free from smallpox. Grip is estimated to have caused 7000 deaths from January to April. An epidemic of modest severity prevailed at the close of the year. The deaths from acute respiratory diseases were excessive on account of it, nearly 18,000 deaths, or nearly 15 per cent. of all deaths, having been caused by such diseases.

PHILADELPHIA.

Medico-Legal Society.—This Society has elected as officers for the ensuing year: President, Dr. Albert M. Eaton; first vice-president, Dr. L. H. Adler, Jr.; second vice-president, Dr. Samuel Wolfe; secretary, Dr. Clewell; treasurer, Dr. G. W. D. Peltz; librarian, Dr. J. D. Nash.

Health Report.—The number of deaths for the week ending February 3rd was 507, an increase of 9 over the previous week and a decrease of 5 from the corresponding week of last year. Contagious diseases: Diphtheria, 128 cases, 24 deaths; scarlet fever, 66 cases, 5 deaths; enteric fever, 39 cases, 4 deaths.

Dr. S. Weir Mitchell's New Story.—Dr. Mitchell's new novel, "Dr. North and His Friends," will begin its career as a serial in the March *Century*. It is said to present under the cloak of fiction many of the actual scientific observations and phenomena that have come to the doctor during his long career as physician and man of letters.

Heating of Street Cars.—The recent cold weather has brought this question again to the front. The Traction Company officials state that they are willing to please the people, but there is such a diversity of opinion they do not know what is wanted. Physicians are of various opinions. The chief surgeon of the Department of Public Safety believes the cars should not be heated, except those making long runs, and those only on exceptionally cold days, such as this city seldom sees.

The Widal Test.—Dr. A. V. Meigs does not place any value on the Widal test in the diagnosis of typhoid fever. An expert at a distance with only a drop of the patient's blood cannot tell much about the diagnosis. Again, the test gives a positive reaction in blood from patients suffering from tuberculosis and other diseases as well as typhoid fever. In a recent case the City Hall laboratory reported a positive reaction and the hospital laboratory a negative one with blood from the same patient. Dr. Meigs believes the test will pass out of use in a few years.

Pure Food.—An eminent lecturer has claimed that the Dairy and Food Division of the Department of Agriculture of Pennsylvania has done more for the health of the citizens during the four years of its existence than have all the doctors in the State. This rather minimizes the importance of the disciples of Esculapius, but there is some truth in the statement, as the percentage of adulterated foodstuffs has been reduced from 90 per cent. to 10 per cent. The Commissioner contemplates investigating the liquor supply, which is also included in the law. That field is a vast one.

Pennsylvania Hospital.—Dr. J. M. Da Costa exhibited a case, February 3rd, which necessitated a differential diagnosis between tubercular meningitis, with arrest of the process and recovery of the patient, and non-tubercular meningitis in the presence of tuberculosis of the lungs. The patient was a colored man who had a typical attack of basilar meningitis with a right-sided hemiplegia. He has practically recovered from the meningitis. At the same time he has lung symptoms and tubercle bacilli are found in the sputum. Notwithstanding this fact, Dr. Da Costa believes it to have been a case of non-tubercular meningitis for the following reasons: First, the presence of marked head symptoms—retraction, rigidity, tenderness in the back of the neck; second, there were none of the secondary phenomena common to tubercular meningitis, such as crying, screaming, spasmodic contractions, etc.; third, the fact that the patient has recovered.

A remarkable pathological specimen was also shown. This was the large white kidney of chronic parenchymatous nephritis. The interesting point was that the patient had had but one kidney, the left one being congenitally absent. The right one had hypertrophied to probably twice the normal size to meet the demand for double work. When this immense organ became diseased it showed the pathological changes in a most striking manner.

Medical Standard.—The Association of College Presidents of Pennsylvania, at a meeting held in Harrisburg, January 12th, adopted the following resolution: "*Resolved*, that the Medical Council of the State of Pennsylvania be requested so to construe the state law and their own decisions that graduates of reputable colleges be eligible for examination by the Council after three years of study in a medical college, provided that work practically equivalent to the first year of our best medical colleges be done in the undergraduate course." The Association is in sympathy with efforts made to raise the standard of medical practitioners, but believes that the admission of college graduates to the second year of the medical course is not detrimental to a high standard.

One of the most zealous champions of the college graduate is Dr. W. W. Keen, who asserts his belief that "a college graduate who has pursued absolutely no medical studies during his college course would at the end of three years in a medical school be better fitted, on the whole to practise medicine than would a man who had gone through the entire course of four years of the medical school without such previous training. But when the college student comes to us with a certain fixed number of hours of study of anatomy, embryology, bacteriology, chemistry, etc., then it is preeminently true that such a man, even although he studies only three years in the medical school, will be a more accomplished physician than the other."

Academy of Surgery.—At a meeting held February 5th Dr. John B. Deaver reported a case of pancreatic cyst. The patient was a woman of 58 years of age, who, although the condition was one of twelve years' standing, had good general health, eating and sleeping well. The distention of the abdomen, however, had caused a prolapse of the vagina some two years ago. The abdomen measured 52 inches in circumference at the level of the umbilicus, the liver and heart being slightly displaced upward. Diagnosis was difficult, but palpation detected a plate of cartilage which led to the diagnosis of a cyst. The abdomen was opened and found to contain large quantities of an oily fluid. The presence of a pancreatic cyst, adherent to the parietal peritoneum, was also revealed. The free fluid was evacuated and the geography of the cyst and its adhesions obtained. The abdominal wound was then closed and an incision made directly into the cyst. Its contents were evacuated, the cavity drained, and the patient made a perfect recovery.

Dr. Thomas K. Morton exhibited a boy from whom he had removed the astragalus for club-foot ten years ago. The foot is almost as perfect as a normal one, no ankylosis having taken place. Dr. Morton has removed the astragalus in about 100 cases. He has never found it necessary to tie a vessel, suppuration has never taken place, and ankylosis has not occurred in a single instance. The wound is closed without drainage and the leg put on a right-angled tin splint.

CHICAGO.

Evanston Hospital.—A ward for contagious diseases is to be erected in connection with the Evanston Hospital. The wing will be two stories and basement, of pressed brick and stone, connected with the main building by an open corridor. The cost of the improvement is estimated at $20,000.

Vital Statistics.—According to a tabulated statement in the weekly bulletin of the Health Department, there were 45 fewer deaths during the week ending January 27th than the week preceding, and 96 fewer than for the corresponding period of 1899. The reduction is chiefly in the chronic diseases and among the aged. The death-rate a year ago was excessive, owing to the fatalities from influenza and its complications. Deaths from scarlet fever and diphtheria show a substantial reduction. The rate for typhoid is the lowest for this season for years. Medical inspectors of schools for the week examined 7376 pupils, of whom 452 were excluded from the schools.

Physicians' Club of Chicago.—At a meeting held January 29th, medical legislation was the subject for discussion. Hon. S. P. Shope, ex-Justice of the Supreme Court, discussed in a masterly manner the constitutional aspects of medical legislation. Dr. J. W. Pettit of Ottawa, Ill., analyzed the present state medical law, pointing out its points of strength and weakness. Dr. George H. Simmons, editor of the *Journal of the American Medical Association*, followed with remarks on the need of organization and cooperation to promote proper medical legislation. A general discussion followed which was participated in by Drs. I. N. Love, Weller Van Hook, C. B. Johnson, James A. Egan, Harold N. Moyer, Clarke W. Hawley, and Frances Dickinson. A resolution was offered and adopted urging Governor Tanner to appoint Dr. George W. Webster as a member of the State Board of Health to fill the present vacancy.

The Schoenborn-Beele Splint.—Dr. Edward H. Lee advocates the use of this splint and says that among its many advantages which it offers are that it can be applied immediately; it is light and neat; there is no necessity of padding with cotton; it is not apt to produce decubitus; it may be removed and put back in place in a very short time,

and the cost of the material is moderate. He knows of no other splint that will adapt itself so perfectly to the form of the limb as this one. In 1891, during his term of service as intern under Professor Schoenborn at the Julius Hospital in Wurzburg, Germany, he had the opportunity of becoming familiar with the making and application of this splint. For the past seven years he has used it in the Cook County Hospital, the Alexian Brothers' Hospital, and in private practise in a great number of cases. It has also been used extensively by a number of the interns of the Cook County Hospital and by some of the members of the attending staff, and the results have been excellent.

Heart's Ease and Mind-Cure.—The Rev. P. S. Henson of this city recently preached a sermon on this subject, and among other things he said: "By mind-cure I do not have reference to bodily cures wrought by mental processes. There is a great truth that lies in that direction and mental therapeutics are forging more and more to the front in the practise of the best physicians, while innumerable money-making fakirs are availing themselves of it for the working of what are accounted by their credulous dupes as miraculous cures. And presently these humbugging hypnotists are riding in chariots, with liveries and servants in attendance on their highnesses, and are organizing banks and projecting ideal cities on a scale of imperial splendor, toward whose erection their confiding followers are expected to contribute all their hard-earned savings, while the projectors, with plethoric pocketbooks, flit across the sea in search of health or pleasure. This is mind-cure that is akin to madness. And Christian Science, which of late has had such a sweep of power, appeals to the same principle, and works by the same principles, and makes big money for its shrewd discoverer. What religion there is in it is a flat denial of the fundamental truths of the gospel."

Tuberculin a Failure in Diagnosis.—At a recent meeting of the stockraisers and dairymen, held in this city, a special committee, after stating that it has never been proved that tuberculosis is transmissible between cattle and human beings, summed up the objections to the use of tuberculin as follows: "The temperature of healthy animals and those affected with the disease sometimes rises after the injection of tuberculin. Some tuberculous animals do not react to tuberculin. Tuberculin does not determine the stage of the disease, but condemns animals which might live for years and possibly recover. Tuberculin may produce the disease in healthy animals, and certainly hastens its progress in those affected. It has been proven that identically the same action as that of the tuberculin can be produced by the injection of the extracts of other products of various bacteria, even such as are known to have disease-producing properties. Tuberculin is a poison, and it is not desirable to inject it into the blood of a cow that is giving milk for the use of the public. Tuberculin develops the germ that it was intended to destroy, adding poison to poison, and being cumulative in its effects. The cases in which it has apparently caused no harm to healthy cattle are so scarce and irregular that no general conclusion can be drawn from them. The expert skill with which the process has been employed at the experiment stations cannot be applied in the general use of the test. The disease can be stamped out in any herd of cattle without the tuberculin test. The compulsory slaughter of cattle under the tuberculin test has been compelled and abandoned wherever it has been tried to any great extent. This is noticeably true in the States of New York and Massachusetts, where laws similar to those now in force in Illinois were repealed as a nuisance. The whole scheme is a vain attempt to eradicate a disease by removing the natural results of unsanitary conditions, while leaving the proximate cause, proper conditions for the promulgation of germs, to go on unmolested. The last germ cannot be destroyed without altering the entire plan of the Creator. What is needed is a law to compel conditions for the prevention rather than means for the extermination of the disease, when that extermination calls for the extermination of cattle." The report concluded that the quarantine cuts off the supply of fresh and healthy cattle, and that the State Live Stock Board is wrong in regarding tuberculosis as a "dangerously contagious or infectious disease," justifying the destruction of private property without compensation.

Prevention of Tuberculosis.—Dr. Charles J. Whalen of the Chicago Medical Society said the number of deaths from tubeculosis in Chicago for the year 1898 was 2416, and the average reported deaths from this disease annually for the past ten years was 2378, 11 per cent. of the mortality from all causes. The United States Government spends annually millions of dollars to prevent the spread of cholera, yellow fever and smallpox, yet to the presence of tuberculosis there exists a spirit of apathy that is a reproach to our intelligence. Intestinal tuberculosis is extremely rare. While infection from milk may be possible, it is extremely infrequent; the chief means of communicating the disease in childhood is by direct infection by inspired air.

The best means of prevention is the destruction of the sputum and the removal of those affected, who are too poor to receive the necessary care at home, to an isolation hospital, which should be provided by the State. It would not be judicious at the present time to make the registration of this disease compulsory, for inspection and disinfection can safely be carried out without working such a severe hardship to these unfortunates. Too rigorous or inhuman restrictions might undo the work already done, or bring it into disrepute, consequently only such precautions should be taken as are really necessary.

It is gratifying to know that Illinois is taking advanced ground on this subject. This view has

also been gaining in favor of late in other States as well as abroad. France and Belgium and other foreign countries have provided sanatoria for the treatment of tubercular children. They are also provided with a school, so that the children not only have a chance to be cured, but at the same time receive an education. The poor adult consumptive, too, needs the protection and care of the State, and every municipality should have a sanatorium where those dependants who are afflicted with the disease may receive the necessary attention. The establishment of isolation hospitals for the consumptive poor is the best step that can be taken for the prevention of the disease. Isolation hosptials are not to be advised for the well-to-do, who can afford and will carry out the necessary instructions at home, for it must be admitted that the presence of so many invalids in all stages of the disease must have a depressing influence. A good trained nurse and control of the patient at home will be found more efficacious and satisfactory to the patient than isolation at a sanatorium.

GENERAL.

The Influenza Reaches Spain.—It is reported from Madrid that there are 5000 cases of influenza in that city. Terrible snow storms prevailed last week throughout Spain and Portugal.

Sunstrokes at Buenos Ayres.—One hundred and two sunstrokes were officially reported in the city of Buenos Ayres on February 3rd. Of these 93 were fatal. The temperature was 120 in the shade.

Faith Curists Arrested.—On complaint of the health office at Lincoln, Neb., warrants have been sworn out for the arrest of four Christian Scientists who were responsible for the death of the child of one of them. The complaint charges violation of the Lincoln health laws.

Epidemics and Prayer.—Influenza is epidemic in Italy and Spain, and the Pope has ordered special prayers to be offered up for the cessation of the affliction. There are 30,000 cases in Italy, but the majority of them are of a mild character. In Barcelona, Spain, there were 124 deaths from the disease on January 26th.

Rat War in Denmark.—Both city and country houses in Denmark are so infested by rats that a society has been organized under the name of the National Danish Rat-Exterminating Society. The record of one week's work announces the death of 90,000 rats. A crematory is being planned for the purpose of disposing of their carcasses.

The Bacillus of Pink-Eye.—Much interest is excited by the announcement that the bacteriologists of the Liverpool School of Tropical Diseases have discovered the bacillus of "pink-eye," the well-known equine epidemic. This has usually been regarded as influenza of the horse and a comparison of the new bacillus with the alleged germs of human influenza will be awaited with interest.

Havana's Vital Statistics.—A report on the vital statistics of Havana for the year 1899, compiled by Major Davis, chief sanitary officer, shows 8153 deaths from all causes in an estimated population of 220,000. Of these deaths 1163 were from enteritis and 1307 from tuberculosis. There were but 103 deaths from yellow fever. Eleven deaths were due to leprosy. The number of contagious and infectious diseases reported was 6442, of which 284 were yellow fever. There were recorded during the year 4181 births, of which 1516 were illegitimate.

Women Physicians.—Two women physicians of California have been placed in official positions within a week. One is Dr. Beatrice M. Hinkle, who was appointed Assistant City Physician by the Board of Health of San Francisco, and the other is Dr. Agnes Walker, appointed from Washington as Quarantine Inspector and Federal Quarantine Officer at Kinyoun. She is the first woman on this coast to receive a Federal appointment to office. Her duties will be to examine women and children who arrive on vessels from infected ports and care for them in quarantine.

Sir Richard Thorne's Successor.—The President of the Local Government Board, the chief sanitary authority of England, has appointed Mr. Wm. Henry Power, assistant medical officer, to the position of chief medical officer and inspector to the Board, left vacant by the death of the late Sir Richard Thorne-Thorne. Mr. Power is well and favorably known in the profession apart from his public sanitary work and the appointment is regarded as a well-merited honor. Dr. H. Franklin Parsons, President of the Epidemiological Society, succeeds to Mr. Power's post, and Dr. R. Bruce Low fills the gap made by this promotion.

The Explosive Lyddite.—The London *Graphic* says: "This high explosive, thus called from the name of the small Kentish town and gunnery center where the experiments with it were made, is nothing else than picric acid brought into a dense state by fusion. Picric acid is a bright yellow substance freely used in peaceful industries for dyeing purposes. It is obtained by the action of nitric acid on phenol or carbolic acid. It burns very violently, and, owing to the tremendous blast produced by the explosion, the destructive effect of a bursting shell filled with it is some eleven times greater than that of a shell filled with powder. Common shells of forged steel filled with lyddite are used with 6 and 9.2-inch breech-loading guns, and with howitzers; also with 4 to 6-inch quick-firing guns."

An Appendicitis Club.—An appendicitis club was formed in Cleveland, O., about February 1st. It is proposed to make this organization a national one, and to establish branches in all the cities of the United States. To become a member one must have been operated on for appendicitis.

There are two or more grades. The ordinary members are those who have been operated upon but once. The higher ranks are composed of those who have submitted to two or more operations. Honors will increase according to the number of operations undergone. No doubt those members will label themselves after the manner of the man who became unconscious in an accident. There was found upon his chest, when the clothing had been removed from it, the legend: "My appendix has been removed."

Medical Control of Marriages.—A bill has been prepared in Colorado which, if passed, will place the granting of marriage licenses in that State in the hands of a board of medical examiners. In each county there is to be a board, to consist of three physicians, no two of the same school; and where possible the board is to have one or more female members. Licenses are to be granted to men not less than twenty-five years old and to women not less than twenty-two. To secure licenses men and women must be free from dipsomania, insanity, tuberculosis, hereditary asthma, scrofula, epilepsy and other diseases. There must be no blood relation between parties who wish to contract. No certificate entitling one to receive a license shall be granted to a person notorious for moral depravity or to one who shall at the time of the application be on trial, under bonds, or in prison for felony.

The Hospital Ship "Maine."—A dispatch has been received from Lady Randolph Churchill, who is on board the American hospital ship "Maine," at Durban, saying the vessel will be stationed there for the present. The "Maine" was filling with wounded men, including members from the battle of Spion Kop. The members of the Maine Committee in London are more active than ever, and are determined to make this American charity a success and keep it going until the war is finished. Mrs. Adair, who is now head of the committee, is perhaps the most prominent and influential American living in England. She is a daughter of General Wadsworth, who was killed at the battle of the Wilderness, and is the owner of the largest cattle ranch in the Panhandle of Texas. The energy and ability with which she manages this big property she is now devoting to the "Maine." Mrs. Chamberlain, the Duchess of Marlborough, and others who hitherto have taken no active part in the work, are now much interested and are determined to raise the £3000 monthly which is necessary to keep the ship going.

The Plague.—The epidemic continues its ravages in India, where the condition is aggravated by the famine. The mortality in Bombay February 7th was unprecedented in the history of that city, the total number of deaths reaching the extraordinary number of 408. A rather sensational report comes from London to the effect that the plague exists in England in an unsuspected form. At Southampton during the last few months dogs have been attacked by a disease which is highly specific in its nature and is gradually spreading to other parts of the country. The fatality among dogs is great. Although the disease has not been diagnosticated as bubonic plague the opinion is that it has been brought on ships by rats and so communicated to the dogs. At Lisbon a decree has been issued announcing that the bubonic plague has disappeared from Oporto and that the quarantine of that port has been raised. The sanitary and hygienic measures instituted at Honolulu have been successful in staying the progress of the disease, but the condition has not yet reached a stage in which it can be pronounced free from danger.

Obituary.—Sir Thomas Grainger Stewart, the noted Scotch physician, died in Edinburgh, February 3, 1900, aged sixty-three. Dr. Stewart was born in Edinburgh on September 23, 1837. He was educated at the High School and University of Edinburgh, and after graduating studied in the universities and hospitals of Berlin, Prague and Vienna. On his return to Edinburgh he became resident physician in the Royal Infirmary. In 1876 he was appointed professor of practise of physics at the University of Eninburgh. He was the author of "Bright's Disease of the Kidneys," which has passed through two editions in Great Britain and two in America. He was a member of many learned societies, an honorary fellow of the Royal College of Physicians of Ireland, and of the College of Physicians, Philadelphia, an M.D. of the Royal University, and received the like honor from the University of Dublin. He was president of the British Medical Association in 1898. In 1882 he was appointed Physician in Ordinary to Her Majesty the Queen in Scotland. He received the honor of knighthood in 1894. He was representative of England at the International Congress on Tuberculosis which met at Berlin in May of last year.

Women Nurses in the Army.—A bill providing for the employment of graduated women nurses in the hospital service of the United States Army has been introduced in both houses of Congress. The bill provides "that women nurses in the proportion of not more than 10 per cent. of the sick and wounded in general and post hospitals of fifty beds and upward, shall be employed by and constitute the women's nursing service of the medical department of the Army. That there shall be a superintendent of women nurses, who shall be a woman graduated from a general hospital training school for nurses. That the nurses shall be graduates of general hospital training schools having courses of instruction lasting not less than two years; that they shall be appointed by the Surgeon-General under regulations approved by the Secretary of War; that they shall receive $40 a month when on duty within the limits of the United States, and $50 a month when on duty outside of the limits of the United States." The bill provides further that nothing in its terms shall be construed to limit the power of the Secretary of War in time of war or national

disaster to avail himself of duly qualified Red Cross nurses or nurses of other worthy societies or associations.

Indiscriminate Charity.—Mr. Andrew Carnegie in an after-dinner speech at the Lotus Club recently vigorously denounced the custom of indiscriminate charity. He said: "Let a multi-millionaire take his millions to the slums and call the people together, saying 'There is a wrong distribution of wealth in the world. You have not got your share. I give to each one of you his share of my millions.' Let that be done in the morning, and let the millionaire return at night to see what good his action has done, and he will find not happiness, but pandemonium. Let him distribute another million and another million every day for a month, and pauperism will increase every day. At the end of the month, seeing the result, he will wish that he could crawl and ask pardon for the harm he has done. He has done more injury in a month than he will do good in all the rest of his life. He has taught the hitherto self-respecting working family that industry leading to self-support and independence has no reward beyond almstaking, idleness and debauchery. It was this class of charities and the sums rich men give to applicants and to societies in order to be relieved of the trouble of investigation, of which I ventured to say that of every $1000 so bestowed $900 had better be thrown into the sea."

Anopheles and Malaria.—The work of narrowing down the causation or conveyance of malaria to this genus alone of all the mosquitoes and gnats is steadily progressing. Major Nichols of the Army Medical Corps reported some time ago the discovery in Burmah, which appeared to him identical with the descriptions published of Anopheles. Its habits were identical, its larvæ found in similar pools, and all the barracks near these puddles were extremely malarious. Specimens were sent to Major Ross, who identified them at once as belonging to the genus and probably to a particular species, *A. Rossii*. So that now in Italy, in West Africa, in India and in Burmah, this single genus has been closely associated with malarial conveyance, if not actually identified as the sole carrier. The task of exterminating malaria appears to be narrowing itself down most hopefully to the destruction of this particular group. As it is few in numbers and both fastidious and readily accessible as to its breeding-puddles, the project is far from Utopian, although it seems almost too good to be true. In this connection it is amusing and irritating, as the *Times* says, to note that Dr. Robert Koch uses the words "my theory" when he comments on new evidence from Java supporting the view that there is a close, and perhaps direct, relation between malaria and mosquitoes. Dr. Koch is undoubtedly a very great bacteriologist, and the world is indebted to him for much good work done and several important discoveries made; but he was not the first to suspect the mosquito of infecting unhappy humanity with the germs of malaria, and the theory that they do so is his only in the sense that he gave it comparatively early adhesion. Dr. Koch has been charged before with endeavoring to monopolize credit belonging to other men, and here seems to be a clear case against him.

Medical War-News.—The South African war continues to be emphatically a surgeon's war. The deaths to date stand, killed in battle, 858; died of disease, 238; a proportion which almost reverses the ordinary ratio usually reckoned at about two deaths by disease to one by bullets in campaigns which are at all prolonged. No doubt the disease will gain in relative importance as a factor in the mortality as the war proceeds, but so far the fever and dysentery death-rate has been an extremely low one. The only exception is Ladysmith, where, under the trying conditions of the siege, the fever-mortality has steadily risen until a recent report from Sir George White, covering only five days, gave a list of 28 deaths due to typhoid and dysentery as against 6 due to wounds. The death-rate among the wounded appears to be rising slightly, apparently on account of the larger proportion of other than Mauser bullets used by the Boers or, perhaps, to the "nicking" of these merciful missiles to increase their stopping power. The rate is still, however, below six per cent. A surprising feature is the small percentage of wounds inflicted by shells, a mere handful when compared with the thousands of bullet-wounds.

One of the most astonishing features of the war is the way in which money continues to pour in to supplement the deficiencies of a dilatory and undeserving Government. Whole companies and regiments are being raised and equipped at private or municipal expense and now one of these, the Imperial Yeomanry, is to have a special hospital of its own provided by private munificence. It is to be a base-hospital near Cape Town, to contain 520 beds, and be known by the name of the corps, although, of course, open to the sick and wounded of all arms of the service. Nearly two-thirds of the necessary funds have been already subscribed and the site is being selected for the building.

The military inactivity of the last few weeks has left the Medical Corps chiefly concerned with the task of nursing and sending home the wounded and counting up the results. But this has kept them busy enough, Magersfontein, Tugela, Colenso, sent flood after flood of wounded into the field-hospitals, tasking the resources of the service to the utmost. They proved equal to the strain, however, and the papers are full of praises of the efficiency and success of *our* department of the campaign, some frankly alleging that it is the only one thus far which reflects much credit upon its organizers. No less than 800 wounded were poured into the field-operating tents the day of the Tugela reverse alone, but every one of these was carefully and thoroughly dressed on the

field, often under fire, brought into shelter before sunset and safely landed at one of the line-hospitals within forty-eight hours. To dress, and remove from the field of battle, 800 wounded men within four hours of the cessation of firing is, we think, something like a record performance in ambulance and bearer work. The hospital trains seem to have proved remarkably efficient, being brought right up to the field of battle, equipped with every comfort and even luxury, iced soda-water, champagne, soup, etc. As each train carried from one hundred to a hundred and twenty patients, the transference of even such large numbers as the Tugela casualties to the line-and-base-hospitals can be rapidly carried out.

CORRESPONDENCE.

A PECULIAR PHENOMENON OF SIGHT.

To the Editor of the MEDICAL NEWS:

DEAR SIR:—I have recently observed quite a peculiar phenomenon in connection with the perception of moving objects. Thus far I have failed to find its explanation in the teachings of medical optics. The experiment to demonstrate this is briefly as follows: Look steadily at a large wheel revolving just fast enough for the spokes not to be seen. Now, if the eyes are closed as in the ordinary act of nictation, at the instant of closure *the spokes of the wheel appear perfectly visible,* as though the wheel had suddeny stopped. If the eyes are voluntarily closed slowly this will not occur. An easy way to observe it is to notice a carriage wheel in which the observer is riding. It is best seen if the spokes are black and the light is diminished, as after sunset.

Getting no explanation from the profession or optical works, I wish to refer the matter to you and your publication for some elucidation. It seems to me to be due to some internal ocular change due to the instantaneous compression of the eye in nictation, and the short duration of this changed vision views it as still.

J. D. Poe, M.D.

Dallas, Texas, December 22, 1899.

[Dr. Ward S. Holder of New York to whom this question was submitted, offers the following explanation: The phenomenon described is somewhat analogous to the more familiar one observed where a wheel rotating in the dark is illumined for an instant with the electric spark. The illuminated wheel makes a single impression upon the retina and, therefore, appears to be at rest.

The impression upon the retina produced by the spoke of a rotating wheel persists for a certain time, and if successive spokes make their impressions upon the retina before the preceding impressions have faded entirely away the result is a faint continuous retinal impression, and the individual spokes are not perceived. But if this continuous impression is interrupted suddenly by winking the eyes or, better, by passing a screen quickly between the eyes and the wheel, it is apparent that the next succeeding retinal impression (provided the rotation is not too rapid) will be of the individual spokes and thus for an instant the rotation will seem to have ceased.—ED.]

SEROTHERAPY AND GOAT'S MILK.

To the Editor of the MEDICAL NEWS:

DEAR SIR: The following communication received by me from a physician in Arizona is interesting and instructive. It contains valuable reference to climatology, serotherapy and dietetics, which I have thought would prove of interest to the readers of the MEDICAL NEWS:

"GLOBE, ARIZONA, ——.

"MY DEAR DOCTOR: In the *Journal of the American Medical Association,* of January 14, 1899, I noticed an article on 'Serum Therapy in Tuberculosis which was of especial interest to me. Two years ago, while practising medicine in St. Louis, Mo., I was suddenly taken with a hemorrhage from the lungs; the next day I made an examination of the sputum and found bacilli. The hemorrhage was as much a surprise to me as were the bacilli, as I did not notice anything unusual in my condition until the hemorrhage, then cough, sweats and fever began, with a repetition of the hemorrhage a month later. At that time Koch's tuberculin R. was given to the public and Dr. Carl Fisch of St. Louis, who is a personal friend of mine, was experimenting with this remedy according to Koch, and he and Dr. E. W. Saunders advised me to try it. This I did, taking the injection every day. The night sweats and fever disappeared, and the cough was slight. It has, however, always been a question to my mind whether tuberculin R. was the cause of my improvement. After taking the injection for eight weeks (at this time I was living in the country and not practising) I left for Arizona. I had been in the Gila valley about three weeks when I had another hemorrhage. This lasted a few days and disappeared entirely and was not attended with fever or night sweats. About five months later, February, 1898, I went to Phoenix to take the medical examination to practise. While there I had another hemorrhage, but paid little attention to it. Again fever and sweats did not follow. The hemorrhage usually occurred on retiring at night and on arising in the morning. Eight months later I wrote to Dr. Fisch, telling him of my condition and he sent me more serum. I began to use it and in two weeks I had another hemorrhage, which lasted about three weeks, bleeding every morning and night regularly and a few times during the day. These hemorrhages were more severe than usual. I was very much reduced physically by them and I took a vacation and went to Guadalapara, Mexico. Here the winter was not as severe. The dyspnea which followed the last hemorrhage disappeared, but the cough and expectoration were

quite profuse. In the latter part of March I had another hemorrhage, which lasted about six days. I was then in Aqua Caliente, Mexico, in the hospitals of the Mexican Central Railroad, as assistant. Fearing the confinement and filth of Mexican cities, I returned to Arizona, and have felt much better since my return. The peculiar features are the absence of sweats and fever. The hemorrhages return every six months, but they do not confine me to bed or hinder me in my work. Was the severe hemorrhage in October due to the T. R.? I stopped using it when the hemorrhage began. *The cause of my resisting the disease, I feel, lies in my good appetite and out-of-door life, and Arizona is the ideal place.* As to goat's milk, last week while making a call in the country I stopped at a goat-ranch, and the goatman offered me some milk. I had never tasted goat's milk before; *it was just grand,* much better than cow's milk, and thus when I came across the article quoted I was quite interested.

"It is held that infants are immunized against the ordinary contagious diseases by the antitoxines in the mother's milk! We know that in Russia they use Kumiss, or fermented mare's milk for the treatment of tuberculosis. In the July number of the *Wide-Wide World Magazine* is a most interesting article by Victor Pitnethley, entitled "The Kumiss Cure." This is all about a wonderful 'farm' in the Russian steppes where consumptive people are made well by drinking mare's milk and basking in the glorious sunshine. Both normal horse blood serum and mare's milk, as well as normal goat blood serum and goat's milk, I have argued contain natural antitoxins and are powerful agents to bring about a 'cure' in tuberculous patients. I have seen Dr. Fisch inoculate two guinea-pigs with diphtheria toxin. One of these pigs he gave goat's milk and it lived; to the other he gave no goat's milk and it died. The same result I have seen with tuberculin R. in monkeys. I am interested because I am in such a condition, again interested as a physician. I believe as you do, that the secret of success lies in pure air, sunshine and good digestion. If there is anything I can assist you in, as to information about Arizona or Mexico, I am at your service, or should you have any suggestion or care to offer any information as to goat's milk, etc., kindly mention it.

"I am, yours fraternally,
"A. F. MAISCH, M.D."

This report is very interesting to me because as early as 1867 I was stationed at Fort Cummings, New Mexico, the "Sentinel of the Southwest," as it was then called. From Fort Craig, after crossing the river, beyond the dreary Jornado del Muerto, or Valley of Death, or literally translated, Journey of Death; at the southernmost end, after a march of ninety miles or more, was Fort Selden. Then sixty-five miles of desert to Fort Cummings and forty-four miles further on southwesterly, Fort Bayard, which has been opened recently as a consumptives' hospital. (See MEDICAL NEWS, December 23, 1899). No location could be better, for north, south, east and west the climate is superbly suited for the treatment of tuberculosis. I have been stationed at Fort Elliot, in Texas, and at Fort Union, New Mexico, and know the Santa Fé trail from beginning to end and believe in New Mexico for the cure of tuberculosis. Beyond Fort Bayard the trail goes westward into Arizona, and all through the region the atmosphere and the climate generally is life-giving in the highest degree.

In 1895 I visited and reported on the climatology of southeastern New Mexico. The present year I had introduced, through my friend and Congressman, General Cogswell of Massachusetts, a bill to create a sanatorium for consumptives at some abandoned military post in New Mexico, but although much time and money was freely spent to carry on the good work it met with obstacle after obstacle. The Army Medical Department has at last successfully inaugurated this noble undertaking, but I understand that no provision has been made for citizens to enjoy its privileges. The history of this effort will be found in the *Journal of the American Medical Asociation,* 1896, and MEDICAL NEWS, December 23, 1899. The Marine Hospital Service has also received, within the year, through President McKinley, the use of another military station for the same beneficent purposes. I am thoroughly in accord with Dr. Maisch in what he has said of the life-giving atmosphere of that remarkable "health section," and it seems to me that this would be a most excellent opportunity for some competent persons, with medical assistance, to engage in goat-farming in New Mexico, and to make provision for the suitable care of tuberculous patients in connection with the ranch. Patients could secure the benefit of the climate, of the goat-milk treatment, and of the normal goat serum treatment, all at the same place.

W. K. PARKER, M.D.,
Formerly A. A. Surgeon, U. S. A.

Westboro, Mass., December 13, 1899.

OUR LONDON LETTER.

[From Our Special Correspondent.]

LONDON, January 27, 1900.

THE GREAT LONDON HOSPITALS AND THE WOUNDED—THE YEOMANRY HOSPITAL—INOCULATIONS FOR TYPHOID—"ANTIS" TO THE FRONT—A MEDICAL PARLIAMENTARY CONTEST—DECLINE OF THE INFLUENZA—THE ROYAL COMMISSION UPON THE WATER SUPPLY AT LONDON.

AN illustration of how this war is shaking London to its very center has been furnished this week by the response of the London hospitals to the Government circular asking what number of beds they could devote to the care of the wounded from South Africa. Guy's, Westminster, Charing

Cross and the Royal Free have each promised twenty beds, St. Bartholomew's fifty, and the Brompton Hospital for Consumptives will also do its share. It is intimated that St. Thomas's, University College, the London and the Great Northern will also devote a certain number of beds within a few days. In spite, however, of the prompt and generous response of the hospitals, this action of the War Office is of decidedly doubtful wisdom and is exciting much criticism. First, because a London hospital is a chronically overcrowded institution, so that whatever beds are allotted to soldiers are taken from the poor, whose only resource in case of illness is the hospital. Second, because a city hospital-ward, although an unspeakable boon to the city slum-dweller and an immense improvement upon his ordinary quarters and surroundings, is far from an ideal health resort. To deliberately send patients from the open air of the veldt and the sea into the fog of London for their health is little short of absurd. In fact, the whole performance smacks of lack of judgment and initiative on the part of the authorities, especially in view of the scores of generous offers of beds in sanatoria and country-houses already made. A single well-built shed hospital in a bracing country neighborhood would accommodate as many patients as the scattered and hardly-spared beds of all the London hospitals put together and under much more ideal conditions for recovery. Several of the hospital boards, while patriotically offering the beds requested, have quietly but firmly remonstrated with the War Office for demanding such a sacrifice from the poor.

The Yeomanry Hospital scheme grows apace. Mr. Alfred Fripp has been appointed senior civil surgeon and Dr. Washbourn senior civil physician and a staff of twenty other civilian medical men is to be attached. Her Majesty has testified her cordial approval of the undertaking by the donation of $500 for the equipment of two beds. And Our Surgical Highness Lister has on behalf of the Jenner Institute presented the hospital with a supply of typhoid antitoxin.

Now that the death-roll at Ladysmith from enteric fever is steadily recording from three to ten names per day, a keen, practical interest is being aroused in the question of "vaccination" for typhoid. This procedure was initiated by Professor Wright of Netley Army Medical College, some three years ago, but until within the past twelve months had not been carried out upon a sufficiently extensive scale to enable any decision to be arrived at upon its efficacy. It has, however, been urged with much confidence upon the troops sent out to South Africa by the Army medical officers and a considerable majority of them are reported to have submitted to it. Hitherto almost the only reports of positive results from the vaccinations had been those of the eight subalterns in the Khartoum campaign, six of whom submitted to inoculation, while two preferred to take their chances without. Not one of the six inoculated contracted the disease, while both the others fell ill and one of them died. The other instance was that of the Kent County Asylum where during a severe epidemic of typhoid eighty-four of the attendants and staff were inoculated. Of these not one contracted the disease, while of their fellows who declined vaccination sixteen developed typhoid.

So that Professor Wright's preliminary note in the current *British Medical Journal* upon the inoculations made by him last year upon the English troops in India is pecularly timely. Although the period elapsed is far too short for positive conclusions to be drawn yet, the results seem really significant already. A reduction of the disease-rate among the 2835 inoculated to 0.95 per cent., as compared with a rate of 2.5 per cent. among the 8460 non-inoculated under observation in the same regiments, can hardly be a mere coincidence. Especially when the death-rate in the same groups for the period is 0.2 per cent. and 0.35 per cent., respectively, a reduction of nearly 40 per cent. If this rate of difference be constant, it could amount to the prevention of 1000 cases of typhoid and 200 deaths per annum in the British Army in India alone, where typhoid is peculiarly rife and responsible for 37 per cent. of the army death-rate. Certainly the inoculations upon the embarking volunteers will be carried out with even greater hopefulness and rigor in the light of these results.

Of course the vivisection and vaccination shriekers could not miss some opportunity of bringing themselves into notice through the war excitement. One of them is fiercely protesting against "poisoning" our brave fellows and numbing their intellects by injections of "decaying animal tissues," by which they elegantly refer to the typhoid vaccine. The other has lifted up its voice loud and long against the rejection of volunteers for active service on the ground of non-vaccination, which it describes as "sacrificing the interests of the Empire in support of a hotly disputed medical dogma."

The resignation by Sir John Lubbock, on his elevation to the peerage, of his seat in Parliament has given rise to a contest of singular interest to medical men. The two most prominent candidates for the vacant seat are both members of the profession, in a broad sense, Sir Michael Foster, the famous physiologist, and Dr. W. J. Collins, the late chairman of the London County Council. As the former represents the Conservatives and the latter the Liberals, the profession seems safe to be represented in the House of Commons for this borough whichever way the election goes. The seat in question is that of the University of London and the voters are the alumni of the University resident in England, wherever scattered. Fancy having Harvard represented in Congress! A slight ripple has been stirred up in medical circles by a letter in one of the journals signed "M.D.," accusing Dr. Collins of being an anti-vaccinist and urging the medical alumni of the University not to vote for him. There appears to be reason for suspecting the strict orthodoxy

of the candidate in this respect, but we fear appeals of this sort will bring him more votes than they will cost him.

The great epidemic of influenza of the past month seems to have at last reached and passed its climax. Its death-roll last week reached only 208 names as compared with 340 and 316 the two previous weeks. The deaths from diseases of the respiratory organs also fell synchronously from 1222 and 994 to 728, which is only 41 above the corrected (10 years) average for this week of the years, so that, although the death-list is still far too high, we may hope that the worst is over. A similar decline is registered in the other large English towns, especially in the south. The rate of Brighton, which, two weeks ago stood at more than double its ordinary level (44.9 per 1000), has now fallen almost to the normal, while in the midland towns the decline is much less and in the northern Sutherland and Newcastle the rate is still increasing. Which seems to support the belief that the epidemic is sweeping over the country from south to north. Several towns, notably Brighton and Plymouth, have registered the highest recorded death-rate in their municipal history during this epidemic. In one feature it has singularly resembled our own great outburst in 1890 in the large proportion of the deaths which occurred in elderly and particularly in aged people. While we have this favorable news to give of the decline of the epidemic in Great Britain, the spread of the disease continues on the Continent. The mortality at Munich has been greatly increased thereby.

The Royal Commission upon the Water Supply of London, after sitting nearly three years, during which time two of its members have died, has at last been delivered of its report. It is unanimously in favor of the purchase of the undertakings and plant of all the Metropolitan Water Companies by the municipal authorities and their consolidation and management under a special Water Board of not less than thirty members. So far its decision is excellent, but when the report goes on to recommend purchase at practically the Companies' own valuations and declines to recommend any restrictions upon the taking of flood-water from the Thames, we fear few municipal reformers and sanitarians will agree with it. It also dismisses the superb scheme of the London County Council for bringing a really adequate supply of water from the Welsh mountains, as a project with "something attractive" about it but as quite unnecessary for practical consideration at present, inasmuch as the Thames will furnish an abundant supply until at least 1941! This is extraordinary, to say the least of it, for even supposing this sublime confidence in Father Thames to be not misplaced, when even now every droughty summer arouses serious misgivings, the date fixed is only forty years distant now and it would take at least ten or fifteen years to bring the Welsh water into London. Moreover, what as to 1942 and after?

TRANSACTIONS OF FOREIGN SOCIETIES.

German.

A NEW INSTRUMENT FOR MEASURING BLOOD PRESSURE—PARTIAL GANGRENE OF PUERPERAL UTERUS—MODERN VIEWS OF OPERATION FOR CANCER OF THE STOMACH—TRACHOMA—INTERMITTENT GOITER.

AT the Berlin Medical Society, December 13th, KAPSAMER spoke of the new instrument for measuring the blood pressure which is called, after its inventor, Gäntner's tonometer. The instrument consists of a pneumatic ring, connected through an air-tight T-shaped tube, with a mercury manometer on one side and a rubber bulb on the other. The pneumatic ring is pushed over the second phalanx of a finger, care being taken to avoid the joints. The distal portion of the finger is then made anemic by an elastic finger-cot on an elastic ring. By compressing the rubber bulb a few times the pressure of air in the apparatus is increased until it is sufficient to control the flow of blood through the finger. The finger-cot is then removed and the air in the tube is gradually allowed to escape until the pressure in the ring becomes so feeble that the finger-tip begins to redden. At that moment the pressure as indicated by the monometer is read. The blood pressure drops 10-40 mm. of mercury when a patient is anesthetized to return to normal after anesthesia. Great hemorrhage or the evacuation of large quantities of pleuritic or peritonitic fluid will cause a sudden drop in the pressure. Vomiting, the ligation of a large artery, such as the femoral, or the application of an Esmarch's bandage will cause a rise in blood pressure. In explanation of these and other instances of alterations in the blood pressure, Kapsamer says that the pressure in the blood-vessels is due to three factors: (1) The energy of the heart; (2) the resistance of the walls of the vessels, and (3) the volume of the blood. The fall of pressure during anesthesia is due to the lessened vascular resistance, since the pulse-rate remains about the same. The same is true of the fall in pressure which follows the evacuation of large quantities of fluid from the pleural or peritoneal cavity or of gas from meteoric intestines. The normal pressure is from 100 to 130 mm. of mercury. It is important to determine how low the pressure may go and life not be lost. A man with a recurrent sarcoma of the pelvis had repeatedly a pressure of 70 mm. Another with recurrent carcinoma of the leg had for some months previous to his death a blood pressure of 65 mm. After an exploratory laparotomy, a man having a large cystic tumor, was found to have a blood pressure of 60 mm. The same evening the pressure was 55 mm., but the patient apparently felt well. At midnight he was dead. An unusually large goiter was removed from a woman aged fifty-nine years. The blood pressure after the operation was 75 mm. Six days later it had fallen to 50 mm. In ten hours she was dead. A woman aged fifty-two years jumped from the second

story. She was unconscious for a few minutes, and then came to herself; except for a few bruises she seemed perfectly well. Her pulse was normal. The blood pressure was tested and found to be only 40 mm. In thirteen hours she was dead. From these cases it appears probable that the lowest pressure compatible with life is about 60 mm.

FRAENKEL having used the tonometer for several weeks testified to its reliability. It has its limitations, however. In aortic insufficiency, for example, this instrument records a greater increase of tension than really exists. This is because it records the maximum pressure, and in the diseased condition the tension in systole is far above normal. It sinks very much in diastole, but that is not indicated by the tonometer. A second shortcoming of the instrument is the fact that it records the pressure in a small peripheral artery. Such a vessel is far more subject to contraction of its muscular walls under psychical influences than is a larger vessel. Hence it is desirable to make two separate tests to determine the blood pressure. In chronic nephritis and arteriosclerosis the pressure sometimes rises to 220 mm. The instrument will sometimes show increased pressure under circumstances which would cause it to pass unnoticed should the physician merely feel the pulse. On the other hand, in the aged, whose arterial walls are rigid, the physician's finger may tell him of high tension when in reality the pressure is far below normal.

At the session of December 20th, GOTTSCHALK showed a part of the wall of a puerperal uterus which had undergone gangrene and had been cast out through the vagina on the 18th day after labor. The woman was a primipara with a contracted pelvis. After three days of labor the head was not engaged. Version was performed and a living child extracted. The mother was much exhausted. Next day she had a chill and a temperature of 105° F. On the fourth day, the high fever continuing, the uterus was washed out with a one-per-cent. lysol solution, and then with 60 per cent. alcohol. Three days later the condition of the patient was so bad that heart stimulants were given hourly, and 24 ounces of 1 per cent. saline solution were injected subcutaneously. The patient perspired profusely, passed a great quantity of urine for a few days, and after expelling a portion of the uterus measuring 6.5 x 2 x 1 inches she finally recovered. Gottschalk attributed the gangrene to the anemia of the uterus brought about by an almost pulseless condition of the patient for two days before the birth of the child, and aided perhaps by large doses of ergot and the use of an ice-bag. The effect of the alcohol, if such existed, must have been distinctly secondary.

At the Free Union of Surgeons of Berlin, December 12th, LINDNER discussed the advantage of the Kader-Mikulicz method of operating for cancer of the stomach by the removal of lymphatic glands, as well as the tumors in the stomach. Kader admits that this prolonged operation has a higher mortality than simple excision, but he hopes that the ultimate results will be better. These hopes, *a priori*, appear to be not well founded, since merely the glands are removed, while the connecting lymphatics are left. Statistics of twenty-eight cases of recurrence also show that while recurrence was local in fifteen cases and in the neighborhood in twelve cases, it was glandular in only one case. Lindner advocated gastro-enterostomy in severe cases of gastric cancer. During the eight months previous he had performed Wöfler's gastro-enterostomy with anastomosis of the ascending and descending intestinal legs, and had to report only one death after operation and that from cardiac failure.

At the Vienna College of Doctors of Medicine, January 15th, H. ADLER spoke of the newer methods of treatment of trachoma, a disease now generally considered to be of bacterial origin. Prophylaxis is most important. In all institutions affected children should be kept away from those who have none of the symptoms of the disease. The speaker referred in detail to the various methods of treatment by caustics and by instruments. He emphasized the importance of combined instrumental and medical measures, speaking very highly of Knapp's forceps.

At the Imperio-Royal Society, January 12th, HITSCHMANN showed a young man, aged twenty-three years, who suffered from intermittent goiter. Only about twenty such cases have been reported. They are of three classes: Those which have external varicose veins but no exophthalmos; those having visible varicosities with exophthalmos, and those having intermittent exophthalmos without visible symptoms. The case presented was of the second class.

SOCIETY PROCEEDINGS.

NEW YORK NEUROLOGICAL SOCIETY.

Annual Meeting, Held January 2, 1900.

Facial and Retrobulbar Neuritis.—Dr. William M. Leszynsky presented a woman, thirty-eight years of age, who came to him first on October 11, 1898. At that time there was a complete facial paralysis of the left side, which had existed for five weeks. There was a loss of taste, but the eyes remained normal. The facial paralysis was preceded by severe pain and tinnitus in the left ear, lasting several days. She was treated by galvanism in the usual manner. Two months later, while under treatment, she complained of severe pain in the left supraorbital and left temporal regions, lasting continuously for over a week. She then became totally blind in the left eye. The pupil was absolutely immovable, and the ophthalmoscope showed edema of the papilla, but nothing else. Within a week well-marked papillitis could be detected in the left eye. The vision in the right eye was normal. Under treatment by mercurial inunctions and the

internal use of iodide of potassium vision improved somewhat, and on November 4th, vision in the right was 22/100ths. She now has optic atrophy, and the vision is decreased. The faradic irritability has returned, but is still below the normal. A diagnosis was made of facial neuritis and a retrobulbar neuritis arising from periostitis in the optic canal. This is a very unusual condition, and for this reason the patient was presented. Dr. De Schweinitz of Philadelphia recently reported two or three cases, but in them the retrobulbar paralysis developed nearly a year and a half after the neuritis. The case also shows that a return of faradic irritability does not necessarily mean a return of motility.

Dr. G. M. Hammond asked if uremia could be absolutely excluded in the case just presented.

Dr. Leszynsky replied that there was a complete absence of all urinary signs and symptoms. The neuritis seems to have been either of rheumatic or syphilitic origin. There are some elements in the case that lead him to think it possibly of syphilitic origin.

Syringomyelia.—Dr. Joseph Collins presented a man whom he had been asked to see a few weeks ago by Dr. Powell. The latter had removed a small lipoma from the lumbar region, having no connection with the spinal cord or membranes, contrary to the opinion that had obtained before operation. The patient is thirty-six years old, and contracted syphilis nearly five years ago. Since that time he has been under almost constant treatment. He complained of weakness in the right leg, pain in the back, and slight numbness in the left lower extremity. Careful inquiry elicited the fact that while still a boy he experienced difficulty in keeping the right leg in the stirrup when riding horseback, and noted in that foot what had really been a clonus. The knee-jerk is exaggerated on the right side, and on that side there is also ankle clonus. There is absolute thermo-anesthesia from the fourth intercostal space on the left side down to the tip of the toe. The diagnosis is syringomyelia.

Dr. Richard H. Cunningham said that he remembered having tested the sensation of this patient some time ago, but did not recall the existence of thermo-anesthesia. He looked upon the case as one of tumor of the cord, and not as essentially syphilitic.

Dr. Pearce Bailey said that several similar cases had been met with at the Vanderbilt clinic during the past three or four years. It is the custom there to examine regularly for such anesthesia, and while the individual case could not be recalled, it is exceedingly probable that if thermo-anesthesia had been found it would have been noted and remembered.

Dr. M. Stieglitz was inclined to accept Dr. Collins's view of the pathology, although it is unusual to find such extreme spasticity in such an early stage. He would like to know if there is any muscular atrophy present anywhere in the body, and if there is any change in the sympathetic supply to the eyeball.

Dr. C. L. Dana also looked upon the case as one of syringomyelia. Some of the cases of slowly developing spastic paralysis without sensory symptoms seemed to him to be really examples of early multiple sclerosis. He had seen such cases develop characteristic eye symptoms after a good many years.

Dr. Graeme M. Hammond said he had an opportunity of examining this man, and agrees entirely regarding the clinical symptoms. He accepts the diagnosis given by Dr. Collins This case is certainly not one of recent development.

Dr. Joseph Collins, in closing, said that the right lower extremity is one inch and a half smaller than the left. There are no ocular symptoms, and no vasomotor disturbances of the face. There might have been in the beginning an area of gliomatosis which, at first, had connected with the central canal.

Tumor of Aqueduct of Sylvius or of Cerebellum.—Dr. Collins presented a boy of eighteen exhibiting all of the cardinal symptoms of tumor of the aqueduct of Sylvius or of the cerebellum. About three years ago it was first noticed that he was lethargic. Fourteen months ago, while climbing into a window, he fell and shortly after this he began to vomit and suffer from periodic headaches. These were followed by increasing sleepiness, and by a disturbance of the gait. His limbs can be thrown around, and the joints bent backward in a remarkable way. The knee-jerks are feeble. There is no nystagmus, and no true cranial nerve palsies or ocular palsies. Both eyes show choked disk and slight pigmentation.

Dr. C. L. Dana thought this peculiar drowsy condition characteristic of tumors in the aqueduct of Sylvius, and extending forward into the third ventricle, yet, in other respects, the symptomatology is that of a cerebellar tumor. If the tumor were in the aqueduct of Sylvius it could not be causing much distention or infiltration, or there would be some eye symptoms. The weight of the evidence seems to favor a tumor in the cerebellum. It is possible that the double-jointed condition was increasd by his present affection.

Hemorrhagic Encephalitis and Myelitis.—Dr. Charles L. Dana and Dr. M. G. Schlapp presented this report, which was read by Dr. Dana. The subject is a man of sixty-seven years of age, who came under observation last June. There is no clear history of intemperance. His previous health has been good. During the last seven years of his life he has been somewhat of an invalid. On June 4, 1899, he complained of headache, and after taking two cups of tea went to bed. He fell out of bed a few hours later, and then discovered a left hemiplegia. He was removed to Bellevue Hospital. At that time his temperature was 104° F., but it quickly fell. On examination, he could not protrude the tongue, which was immobile. He was paralyzed almost completely on the left side. The lips were markedly affected. The abdomen was somewhat rigid. The patellar reflexes were normal, and ankle clonus was absent. Sensation to heat and cold was normal.

The urine showed nothing abnormal. Four days after admission he had a chill and the temperature rose to 105.5° F., and examination of the blood showed the malarial plasmodium. After having been in the hospital for one week it was noted that there was no paralysis of the right arm or leg, and the most notable feature was the paralysis of the tongue and lips. He was unable to make any distinct articulate sounds. He could swallow and cough, and understood perfectly what was said to him. Death occurred on June 25th. At the autopsy, made by Dr. Dana, only the brain and cord were examined. There was slight edema and congestion of the arachnoid. The vessels of the base were not atheromatous. In the right hemisphere was anarea of capillary hemorrhage and softening in the lower portion of the posterior central convolution, and superior part of its marginal gyrus. It involved mainly the deep part of the upper lobe of the fissure of Sylvius. In the centrum ovale were two or three smaller areas of hemorrhage. There was no evidence of hemorrhage or softening in any other part of the cerebrum, cerebellum or pons. The spinal cord showed two foci of softening, one in the upper dorsal and the other in the lower. The brain was hardened in formalin, and then stained by various methods. The microscopical examination showed in the affected area much dilatation of the blood vessels, small extravasations of blood, a great proliferation of cells, showing an irritative reaction to the hemorrhage—in other words, the evidence of an encephalitis, apparently secondary to the disease of the blood-vessels. There were also small areas of softening of the brain in the neighborhood of these hemorrhages, also the result of the breaking and obliteration of the vessels. The walls of the latter were somewhat thickened, but gave no evidence of syphiltic process. Sections and drawings were exhibited. The examination of the rest of the brain failed to show any evidence of sclerosis. The medulla showed no evidence of softening or of inflammation. Examination of the spinal cord has not yet been completed. The cord showed a small center of poliomyelitis in the dorsal region. Below this is a more extensive poliomyelitis, involving both the anterior and posterior horns. The appearances closely resemble those described by other writers on encephalitis hemorrhagica. Regarding the occurrence of speech disturbance in a case of this kind, Dr. Dana said that in the great majority of cases of this form of hemiplegia there is no speech disturbance except a few days after the attack, which might easily be ascribed to shock. In another class of cases of hemiplegia there is a slight uncertainty in speech, lasting for several months. In still another class the hemiplegia is associated with some difficulty of speech, and sometimes with true aphasia. He had never observed any sensory aphasia in these cases. When the lesion is well below the cortex, involving the motor neuraxons and the collaterals going to the opposite hemisphere, there will be some hesitation in speech; when the lesion is still lower down, disturbances of speech are absent. There is a very general opinion prevailing to the effect that bulbar palsies of cerebral origin are due to lesions in the lenticular nucleus, but our present knowledge of the anatomy of the brain makes such a view untenable. Concerning the disturbance of the tongue, the speaker said that Dr. Collins, who has given a critical description of this subject, placed the tongue center in the anterior and upper part of the foot of the anterior central convolution. Some of the centers of the movement of the tongue are probably deep in the fissure of Sylvius, and not subject to experimental stimulation. In the case under discussion it is interesting to note that mastication and deglutition are not impaired. The case also brings up the subject of non-suppurative encephalitis. It seems to be established that there is an infectious hemorrhagic encephalitis in infants; also that there is a hemorrhagic poliomyelitis in adults; also an acute hemorrhagic encephalitis of adults due to some acute infection such as influenza. In the case presented there is a distinct history of malarial infection and of alcoholism, and this combination, it is reasonable to suppose, is responsible for the lesions discovered. Such a case might be classified under the name of degenerative hemorrhagic encephalitis. An examination of the autopsy records of 67 cases of apoplexy showed that 42 of them were hemorrhagic, 11 embolic, and 11 thrombic, and 3 encephalitic.

Dr. E. D. Fisher agreed with the reader of the paper that, in a small percentage of cases, there might be an encephalitis, and that the spinal cord might also be involved. He had seen cases affecting the right hemisphere in which the aphasia was permanent. It is not common, of course, for such persons to lose the memory of names and things, but he can recall a few such cases. He did not believe there are enough fibers passing over from one side to the other to account for that. The right hemisphere is the region in which the center of speech is fixed, and while it is more accentuated on the left, the right cannot be entirely excluded. This belief is based on clinical experience.

Dr. B. Onuf thought that, as a rule, dysarthria rarely occurs in connection with lesions of the internal capsule; it is more often met with in lesions of the cortical foci. It is most frequently observed with lesions of the left hemisphere. To explain this he assumes that all the articulatory muscles are represented in each hemisphere, and that the center of the right hemisphere is subordinated to that of the left hemisphere through the fibers of the corpus callosum. If there is a lesion of the right hemisphere there may be a temporary dysarthria; if, however, there is a lesion of the left hemisphere the dysarthria would be permanent. On the other hand, if the lesion were in the internal capsule, whether on the right or on the left, the dysarthria would occur. If the dysarthria were marked it could be stated almost certainly that the lesion is in or near the cortex. He believes that there is a double speech center, and

that that of the right hemisphere is subordinated to that of the left.

Dr. Fisher asked Dr. Dana whether he had noticed any difference in the character of the articulation in the first few days between a right hemiplegic and a left hemiplegic. Personally, he has found as much difficulty in the one case as in the other.

Dr. Collins thought the paper most interesting because adequately proving that a single lesion is capable of producing diffuse and multiple lesions in the central gray matter. It is the first communication of the kind ever presented in this country. The paper called attention to the possibility of an acute malarial infection giving rise to such a process. The changes discovered in this examination are those which might be expected theoretically. He does not see how this report could have much effect on the question of aphasia because serial sections of the entire length of the medulla oblongata were not presented—indeed, he is doubtful if the patient had true aphasia. There might have been an affection of the central allocation of the tongue not implicating the muscles of the lips and palate, in part due to the very small focus of inflammation in the medulla oblongata. The explanation given by Dr. Onuf was the one that he has himself long held, and which is the same given by Dr. Dana in this report.

Dr. M. G. Schlapp said that the inflammation in the medulla seemed to be a very recent one. There is a small round-cell infiltration, but the large proliferating cells found in the cortex are not present. The infiltrating stage and the proliferating stage are both represented in the cortex.

Dr. Dana, in replying to Dr. Fisher, stated that his experience has been that dysarthria occurred about as often with right hemiplegia as with left, and that dysarthria is practically due to the size of the lesion. If the lesion be very large and the hemiplegia complete there is almost always dysarthria. Where there is only slight hemiplegia associated with dysarthria it is probable that the lesion is high up in the cortex, or involves a part of it. He thinks that this case illustrates dysarthria rather than aphasia. The weight of evidence in this case seems to indicate a paralysis of the tongue is the result of a cortical lesion—a sudden apoplectic lesion. There was no hemorrhagic process in the medulla.

Lead Paralysis with Autopsy.—Dr. B. Onuf reported this case. The patient is a man, thirty-seven years of age, with a good family and personal history. He was a painter for many years, and had one attack of lead-colic some years ago. A short time ago he had a severe fall, and for some days afterward appeared in a dazed state. From March until August he had not painted; then he began painting again with colors containing a large percentage of lead. He kept this up during the month of August, but during this time suffered frequently and severely from colic. At the end of August he became quite ill, and, in three or four days, was almost helpless in the lower extremities and in the left arm. On admission to St. Catherine's Hospital, in September, 1899, there was complete flaccid paralysis of both lower extremities; absence of both knee-jerks; marked tenderness of the nerve-trunks and muscles of the lower limbs. There was also paralysis of the flexor muscles of the left arm and of the extensors of the fingers. The gum showed a "lead line." Under diaphoretic treatment the spontaneous pain ceased. On October 4 he had an attack of severe dyspnea, and on the following morning died in a second and similar attack. The extensors and flexors of the right arm were wasted, as were also the peroneal muscles and the flexors of the thigh. The left lung was the seat of a bronchopneumonia. Microscopical examination showed what appeared to be a poliomyelitis of the anterior horns. The parts examined so far are the second and fifth lumbar, and here and there is an enormous infiltration of the walls of the blood-vessels with round cells. This infiltration of cells is so extensive as to lead to very general distention of the nerve cells. The anterior roots are markedly affected, but the posterior roots of the lumbar are normal. The plantar nerve shows increase of connective tissue and endarteritis obliterans. The liver was examined by Dr. Bookman for lead, but none was found. As five weeks had elapsed such evidence is not of much importance.

Dr. L. Stieglitz said that this case showed in the human being exactly what he found in his case of experimental lead-poisoning. In experiments on 36 animals he obtained in one guinea-pig only an acute poliomyelitis at the post-mortem, and also cell infiltration and more or less destruction of the nerve-cells around the foci. This guinea-pig was acutely paralyzed. Death occurred within twenty-four hours. In his experimental cases he obtained, in every instance, changes in the ganglionic cells themselves. The case presented in the paper is, of course, an atypical one of lead-poisoning, and hence would not justify any conclusions regarding the ordinary pathology of lead-poisoning. The cases reported by Oppenheim and by Herter seem to him the most typical.

Dr. E. D. Fisher thought the clinical history of this case corresponds more with that of alcoholism than of lead-poisoning. As a rule, in cases of lead-poisoning the lower extremities are the parts first involved. He had written on this subject some years ago, and called attention to the occurrence of these degenerative changes in the brain and cord in cases of alcoholism. Apparently the case reported combines both alcoholism and lead-poisoning. The changes in the central nervous system were pretty well established.

Dr. W. M. Leszynsky said that it also seems to him that the reader of the paper has not proved the connection between the lead-poisoning and the post-mortem findings. Certainly the case appeared to be one of alcoholic toxemia, or of some acute infectious process.

Dr. Hammond said that while it is very probable that the man suffered from lead-poisoning, he doubts very much if the lead had anything to

do with the condition of the spinal cord; it is much more probable that it was the result of some acute infectious process. He does not believe that a case of true lead toxemia has been reported in which such changes in the nervous system were observed.

Dr. Cunningham said that some weeks ago he met with a case of lead-palsy in a man who at the same time developed a mild form of influenza. The phenomena observed were quite similar to those reported in the paper.

Dr. Collins also took the ground that in addition to the lead-poisoning there had been an alcoholic neuritis, or some acute infection giving rise to the changes in the spinal cord.

Dr. Onuf said that by reason of the frequent attacks of colic during the last few weeks the man had been unable to work and this seemed to show the close connection between the lead-poisoning and the other symptoms. Cases of alcoholic neuritis usually present quite a different picture from that exhibited by his case. The autopsy revealed evidence of a certain amount of alcoholism, it is true, but the man had not been drinking for a considerable time previously. There was no history of an acute infectious process.

NEW YORK ACADEMY OF MEDICINE.—SECTION ON PEDIATRICS.

Stated Meeting, Held January 11, 1900.

Thomas S. Southworth, M.D., Chairman.

Spina Bifida.—Dr. Sarah Welt Kakels presented a patient with this anomaly. There had been a normal birth and the infancy had been normal. The child does not seem to suffer any pain in the tumor except when it becomes red and inflamed from some external irritation. The coccyx in the case deviates slightly to the left and the cystic tumor of the spinal bifidi is also to the left. Pressure upon the tumor seems to cause no medullary or cerebral symptoms. The tension of the tumor increases when the child cries or coughs. There is a good chance to see this in the case, as the patient is at present suffering from whooping-cough. The tumor is made very prominent on coughing. These tumors are more frequent in females and are usually accompanied by other anomalies. In this case, however, the child seems to be perfectly well except for the presence of the spina bifida itself. Just above the tumor the characteristic dimple of spina bifida can be seen.

Dr. Vanderpoel Adriance presented a macerated specimen of an anencephalous monster. The cerebrum in the case was absent and all the bones covering the side and vertex of the head were absent, or extremely rudimentary. The bones in the upper part of the face were defective in the same way. The cerebellum was practically complete and the bones at the base of the skull were perfectly normal.

Dr. Charles G. Kerley presented a series of light splints which prevent flexion beyond a right angle and so make it impossible for a child to scratch its face, or to rub its nose, or pull its ear, or rub its eyes in any of the irritative affections of these parts. They would also prevent thumb-sucking. Despite the presence of the splint children have so much movement in their shoulder-joint that they are still able to reach the top of their heads, so that in eczema capitis it is necessary to pin the sleeve to the dress in addition to the splint. There was also a splint to prevent masturbation. Extension of it is possible only as far as a right angle or even less. It is intended to be worn only during sleep, or when the child cannot be under observation. Then it serves its purpose very well.

Dr. Herman, said in discussing the subject, that the cases in which such appliances are most needed are among the very poor. For them the expense of a splint is too great. In the European clinics the custom is to put cardboard cuffs on the children that prevent flexion at the wrist, and fasten their arms by a piece of tape or a shoestring that passes around the back. This is very simple and costs practically nothing.

An Epidemic of Measles.—Dr. Vanderpoel Adriance reported the statistics of an epidemic of measles at the New York Nursery and Child's Hospital. While in private practise measles is an extremely simple disease, involving very little mortality, in hospital practise it is the most serious of the children's diseases. Its mortality is apt to be high, it is very contagious and the contagion endures for a long time. The difference between the contagiousness of scarlet fever and measles is well illustrated by the condition of affairs at the hospital during the present summer. One case of scarlet fever developed in the wards and was immediately segregated. Only one other case of the disease developed as the result of the exposure of the children. Measles occurred and in spite of the most careful precautions continued during the whole summer. Altogether 96 cases were treated. It is often said that measles protects very well against second attacks, but that is not the experience at the Nursery and Child's Hospital. In 16 of the 96 cases the attack was the second one. In 14 of these 16 cases the former attack of measles was not assumed to have taken place on the word of the mother, or any imperfect history, but because the patient had been actually under observation at the hospital during the preceding attack. Diphtheria is the most frequent complication. Once diphtheria has gotten into a hospital ward it is extremely difficult to get the contagion out. In 36 cases of diphtheria complicating measles, there were but four deaths. This very limited mortality is due to early diagnosis and to the free use of diphtheria antitoxin.

While the death-rate of simple measles was 15½ per cent. that of the measles complicated by diphtheria was only 11 per cent. Measles is especially severe in very young children. Below

the age of two the death-rate was 36 per cent.; above that age it was only 5 per cent.

Koplik's Spots in Measles.—In 79 cases the careful examination of the buccal mucous membrane was made for Koplik's spots. In 76 per cent. of the patients they were found. In 20 per cent. of the patients they were noted before the rash on the body appeared. In one case it was four days before the cutaneous exanthem, in two cases it was three days, in four it was two days, and the average time of its appearance before the rash on the body was about 36 hours. Its appearance, however, it not sufficiently early to enable it to be of any prophylactic importance. Dr. Koplik himself has expressed the opinion that the early diagnosis of measles, made possible by the discovery of these spots, would enable hospital authorities to segregate measles cases before they have been any serious source of contagion to other children. This does not promise to prove true in practise. Considerably before the appearance of Koplik's spots the catarrhal stage of measles is already well marked. It is now generally agreed that the disease is especially contagious during this catarrhal stage and before the appearance of any exanthem. For the discovery of Koplik's spots good, bright daylight is absolutely necessary. A certain amount of experience in finding them is also a requisite. Frequently they will be missed by one not used to looking for them and be found only after repeated examinations. Observations made under gas-light are practically of no value in the matter.

Dr. J. Sobel said that he believes that Koplik's spots are always present in measles. He has seen a large number of cases, several hundred during the last two years, and in every case in which he has been able to look for them with sufficient care he has found the spots present. They occur from a few hours to five days before the eruption on the body. Where a measles-like disease occurs and these spots are not found the disease is probably German measles. These spots constitute the differential diagnostic sign for the two diseases. There are other signs by which German measles may be distinguished, although they are not so constant. German measles comes on more suddenly, that is, without the preliminary catarrhal period. There is usually less fever, from 99.5° to 101° F. The spots are concentric and crescentic in shape. There is a velvety feel to the skin and the posterior cervical glands are enlarged. Then, there is a lack of correspondence between the severity of the eruption and the illness of the patient. There may be a very widespread, abundant eruption and very little disturbance of the patient's feeling. German measles does not protect against the ordinary form of measles, and care must be taken that children that have had one are not needlessly exposed to the other. For the discovery of Koplik's spots a good light is absolutely necessary. Gas-light should not be used. The child's cheek should be thoroughly everted and direct daylight from an open window used.

Dr. J. Howland presented the statistics of 61 cases of measles at the New York Foundling Hospital. Altogether there were only four deaths. All pneumonia cases were specially quarantined from the other children as soon as the pneumonia was discovered. All of the deaths were among the penumonia cases. One of the reasons for the comparatively small mortality was the frequent cleansing of the wards. At the end of each week all the children were removed from a ward and it was freely carbolized and treated several times to the vapor of formalin. All of the measles cases were immunized against diphtheria by the injection of from 250 to 400 units of antitoxin. No diphtheria occurred. There was no noma, though there were three cases of very severe ulcerative stomatitis. There was also measles at the country branch and altogether in 51 cases Koplik's spots were carefully looked for. They were found in 84 per cent. of the cases. In one case, four days before the eruption on the body, in two cases three days before that eruption, in six cases two days before, in 15 cases 24 hours before, and in 20 cases just as the eruption appeared. In 7 cases they were not found until after the eruption on the body had reached its height. Usually about the time that the eruption on the body was at its maximum, the spots on the buccal mucous membrane began to fade and soon disappeared.

Dr. Milner said that Koplik's spots are especially valuable for differential diagnostic purposes. They enable us to recognize at once the eruptions that occur after antitoxin and to differentiate measles from German measles. Dr. Lipmann said that while the name, Koplik's spots, was a very proper one since Koplik's observations and writing had made them of practical value for the general practitioner, it must be remembered that Flindt had described them as early as 1880. Flindt had also noticed their presence on the conjunctiva in certain cases. Dr. Lipmann has recently seen a case in which the spots were on the conjunctiva. It is evident that for the early diagnosis of measles there is no better sign, and it should be made the duty of hospital interns in all cases where measles exist in a hospital to examine the mouths of the children carefully twice a day in order to segregate the measles cases from other children as soon as possible.

Recurrence of Measles.—Dr. Mabbot said that the occurrence of attacks of measles in 16 per cent. of the cases in Dr. Adriance's statistics seems entirely too high and he can only think that some source of error must exist. Undoubtedly cases of German measles are frequently mistaken for ordinary measles in reports of second attacks. Koplik's spots will especially be of value to the medical profession if they enable the general practitioner to differentiate these two diseases with certainty.

Dr. Mabbot described the system in operation at one of the hospitals in New York City by

means of which the Board of Health's Report as to the existence of contagious disease in any particular locality is made available to enable the hospital to guard against the admission of contagious diseases to its wards. A tabulated record is kept of the exact location of every case of contagious disease that is reported by the health authorities. Visitors who come to the hospital from infected houses are excluded. Each visitor is asked to give his or her address and it is the duty of the door attendant to note whether the address is that of a house in which contagious diseases exist. When patients apply for admission the same rule is put in effect. In this way the hospital is able to guard much more effectually than before against the admission of contagious diseases.

Dr. Kerley is of the opinion that measles does not protect from second attacks as much as has been thought. The predisposition to repeated attacks of measles seems to exist very distinctly in certain families. There is one family in which he has seen within this last year two children have two distinct attacks of the disease. In both attacks Koplik's spots were noted. The mother of the family, an extremely intelligent woman, has assured him that each of her other two children has had two attacks of measles and one of them has had three. It is a tradition in the family that the children acquire measles whenever they get the slightest opportunity.

Dr. Freeman said that he has seen measles run its course without Koplik's spots and that he has seen the spots where no measles existed and where the disease did not develop afterwards. It does not seem safe, then, to segregate children because of the spots alone, as they may thus be exposed to the disease at a time when they are not already infected.

Dr. Herman said that Koplik's spots were especially valuable to the medical inspector of schools. A careful examination of the buccal mucous membrane enables one to exclude children from school two and three days before the disease would ordinarily be discovered. A considerable amount of exposure of the other children at the school is undoubtedly saved by this means and the spread of an epidemic of measles greatly diminished.

REVIEWS.

A Pocket Text-Book of Theory and Practice of Medicine. By GEORGE E. MALSBARY, M.D., Assistant to the Chair of Theory and Practice of Medicine, Medical College of Ohio, Cincinnati. Illustrated. New York and Philadelphia: Lea Bros. & Co., 1899.

A BOOK on the practise of medicine must indeed be very extensive to include all the facts and data which have been added in the last decade, and nothing short of voluminous and comprehensive systems of medicine can fulfil every indication for a complete work on the subject. This handbook, which is included in the series of pocket text-books, is an excellent little work and is an admirable exposition of the subject dealt with. It is pleasant reading and will appeal to every student and general practitioner who wishes to consult a ready reference book on medicine. The chapters on infections, intestinal and blood diseases are full of instructive details. It covers the entire subject of general medicine and is thoroughly modern, and is written in a careful and pleasing style. This volume we are sure will find favor with the profession.

An Introduction to Dermatology. By NORMAN WALKER, M.D., Fellow of the Royal College of Physicians of Edinburgh. New York: Wm. Wood & Co., 1899.

THIS work is exactly what it claims to be, namely, an introduction to the study of dermatology. It covers the subject of skin diseases in a very comprehensive manner, and, while making no pretension to exhaustiveness, it nevertheless treats of the various lesions fully enough to enable the student and general practitioner to acquire a very good knowledge of them.

A good deal of attention has been paid to the histopathology of the more important diseases and the most cursory examination of these parts shows the author to be a man who is well acquainted with the latest scientific work in his specialty, and with the most recent theories.

The book is profusely illustrated. Some of the plates are in colors, and although the majority cannot be said to be very truthful reproductions, they still give the reader some idea of the appearance of the various lesions.

Treatment of Ozena.—During the winter months the patient should take cod-liver oil, or, if this is not well borne, the following mixture:

℞ Ammonii chloridi .....gr. xv
Potassii iod .....ʒi
Syr. gentian .....ʒviii
M. Sig. One tablespoonful twice a day.

Or, he may instead, take from 1 to 20 drops of a 1 per cent. solution of iodide of arsenic, the dose depending on the age of the patient.

If hereditary syphilis is suspected, the medicine should be ordered accordingly. It is advisable to make a change in the irrigating fluid from time to time, say once a month, sometimes usin gthe following, recommended by *Moure.*

℞ Ac. carbolici .....ʒvii
Glycerini .....ʒiiiss
Spiritus (90 per cent.).....ʒii
Aquæ .....ʒxii
M. Sig. One tablespoonful to the liter of tepid water.